Basic Tutorials

How to track and record actions done on installed and spare electric motors?

The goal

We have electric motors that are components of machines of a certain type. Some are currently installed and in service and others are in the warehouse and can be used as spares.

There are two main goals:

1. We would like to track the use of the motors on the machines.

2. We would like to track the repair/ maintenance work done on those motors.

Note that there are two things that will be tracked by comma CMMS: we will track the actions done on the machines themselves and we will track actions done on components of those machines.

How to do it?

The assumptions are that we have 2 machines each with a motor installed and two spare motors.

1. Create the FL hierarchy for the machines

a. Please see https://commacmms.com/site/faq/index.php?action=artikel&cat=4&id=18&artlang=en for a tutorial on how to create functional location hierarchies and implement the following structure:

i. “Your Plant” -> “Machinery” -> “Type A” -> “Machine 1” -> “Main motor”

ii. “Your Plant” -> “Machinery” -> “Type A” -> “Machine 2” -> “Main motor”

2. Create a non-consumable equipment item for each of the electric motors

a. Please see https://commacmms.com/site/faq/index.php?action=artikel&cat=4&id=21&artlang=en for a tutorial on the creation of non-consumable equipment. When you create the 4 motors as equipment, consider the following:

i. Create one equipment for each of the 4 motors

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ii. Set two motors as “in storage” with a target FL of “Plant” -> “Machinery” -> “Type A” as this is the highest FL hierarchy level common to all motors.

iii. Set two motors as “Installed” with a installation FL of “Plant” -> “Machinery” -> “Type A” -> “Machine X“, where X is the machine number where each of the motors is actually installed.

b. **Note 1:** you will want to add a serial number or a distinguishing identifier for each motor when you create them to allow you to tell one from the other.

c. **Note 2:** In comma CMMS there is the concept of “Container” of non-consumable items. This is what allows users to control the overall quantity of non-consumable spares they may have. In a real-life application, we would recommend that you place the 4 equipment motors you just created onto a “Container”. To know more about containers, their purpose and usage, please see https://commacmms.com/site/faq/index.php?action=artikel&cat=11&id=89&artlang=en&highlight=container.

3. Accomplishing our goals

a. There is an older tutorial video that shows the steps described below and although it is a little old, it still is valid for the most part: https://www.youtube.com/watch?v=SdBwLlRMcOg

b. Create the Work request and link the electric motors to it

i. Suppose a motor is bad on Machine 1 and maintenance will remove that motor and repair it. We are going to do all of this using work requests and work orders. To know more about this, please see https://commacmms.com/site/faq/index.php?action=artikel&cat=4&id=19&artlang=en

ii. Create a work request and assign it to the FL hierarchy all the way down to “Main motor” under “Machine 1”. Enter a summary like “Replace main motor” and a description like “Main motor is broken. We suspect it is a problem in the bearings.”

iii. After saving the work request, get back on to it and go to the equipment tab. Click "add equipment a"nd search for the motor that is installed on the machine (this is why it is good to know the serial number, the ID or a differentiating identifier of each unit). When you find it, its current status will be visible on the right and will show “Installed” because we know that motor is currently set as installed on Machine 1. Change the status of this motor to “Under repair” and then click the “Add to usage list” button.

iv. Repeat the step above to find the spare

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motor you are going to install on the machine. Change its status from "In storage" to “Installed” and click the “Add to usage list”.

v. Save the work order.

c. Approve the change of status of the of the motors

i. This step is usually done by a supervisor. This is the way the supervisor has to control equipment usage. The approval makes the use of the equipment done on the work order permanent on the system. To know more about this, please see this video tutorial: https://youtu.be/SdBwLlRMcOg?t=6m22s

d. Complete and close the work order

i. After the job is done, go back the work order and set it to “COMPLETE” and then to “CLOSED”. Know more about the need for these two statuses here: https://commacmms.com/site/faq/index.php?action=artikel&cat=9&id=24&artlang=en&highlight=complete

e. Check the historic data of the motors

i. To see what has happened to each motor, you need to go to the Equipment search console (“Menu” -> “Assets” -> “Equipment and Tools”). Find the motor you would like to study on the list and click the ID. Another tab will open on your browser with the properties of the selected motor. Scroll down and click “Movement log” on the bottom left of the page. Here you can see and/ or download the full movement log of the motor along with links to the work orders where the movement was recorded.

ii. As times go by, you accumulate the full history of the item from the day you bought it to the day you dispose of it.

f. Check the history of jobs done on Machine 1

i. For this you need to go to the work order search console (“Menu” -> “Maintenance” -> “Work orders”).

ii. On the tabs, on the left select FL and specify the full hierarchy until you reach “Machine 1”.

iii. Click “Show” and all the actions done on the machine will show up on the list.

iv. As time goes by, you accumulate the full history of what was done on machine 1 and can compare it with other machines by, for example, exporting data for each for a certain time frame and comparing how

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many high priority actions you had for each. If there’s a disproportionate number of P1 actions in Machine 1 when compared to Machine 2, you may have a design or installation issue on your hands.

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