proteus mmx

PROTEUS MMX – BILL OF MATERIAL – WORK ORDER
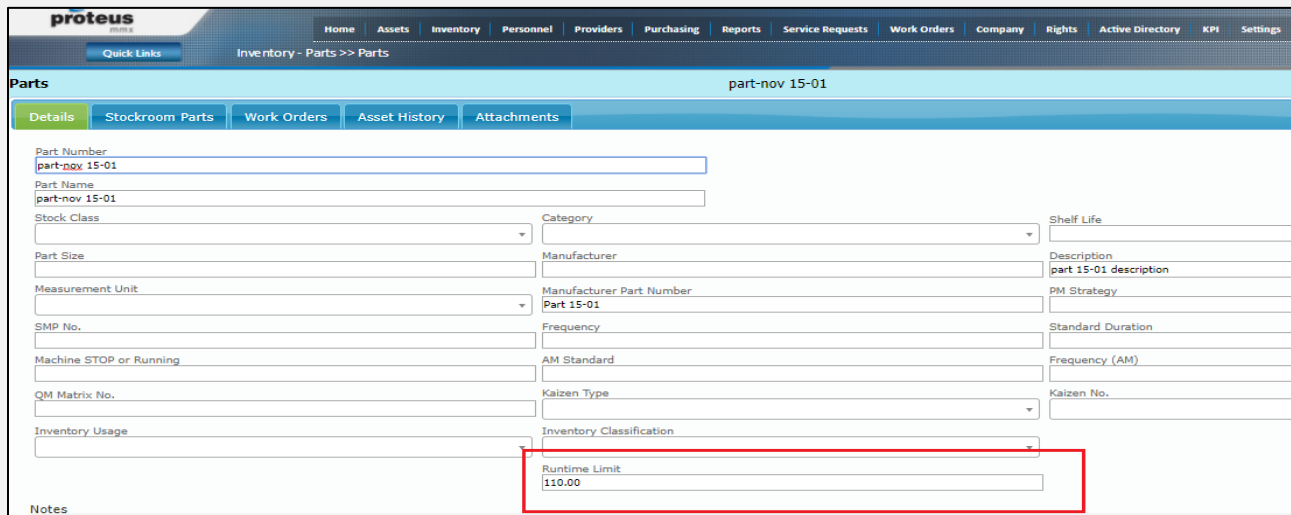
EAGLE TECHNOLOGY, INC.

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BILL OF MATERIAL – WORK ORDER

OVERVIEW

There is Bill of Material (BOM) – Work Order Enhancement on the **Asset Master** page. From the **Assets Navigator**, select an asset and click the **Perform BOM** icon.

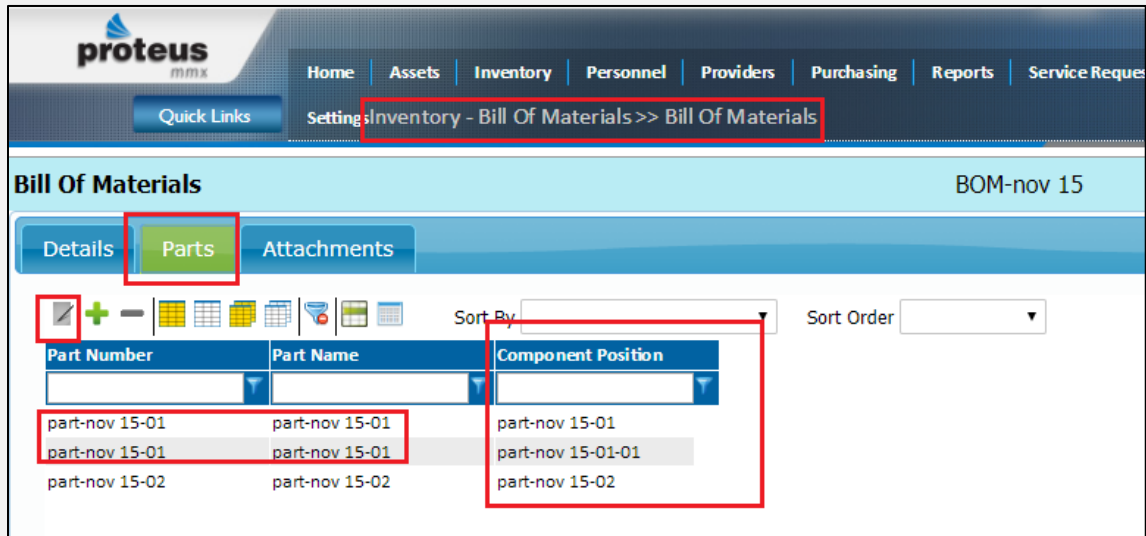**NOTE:** This feature will only work when the **UL** feature is **On.**

STEP 1 – CREATE A PART AND GIVE IT A RUNTIME LIMIT

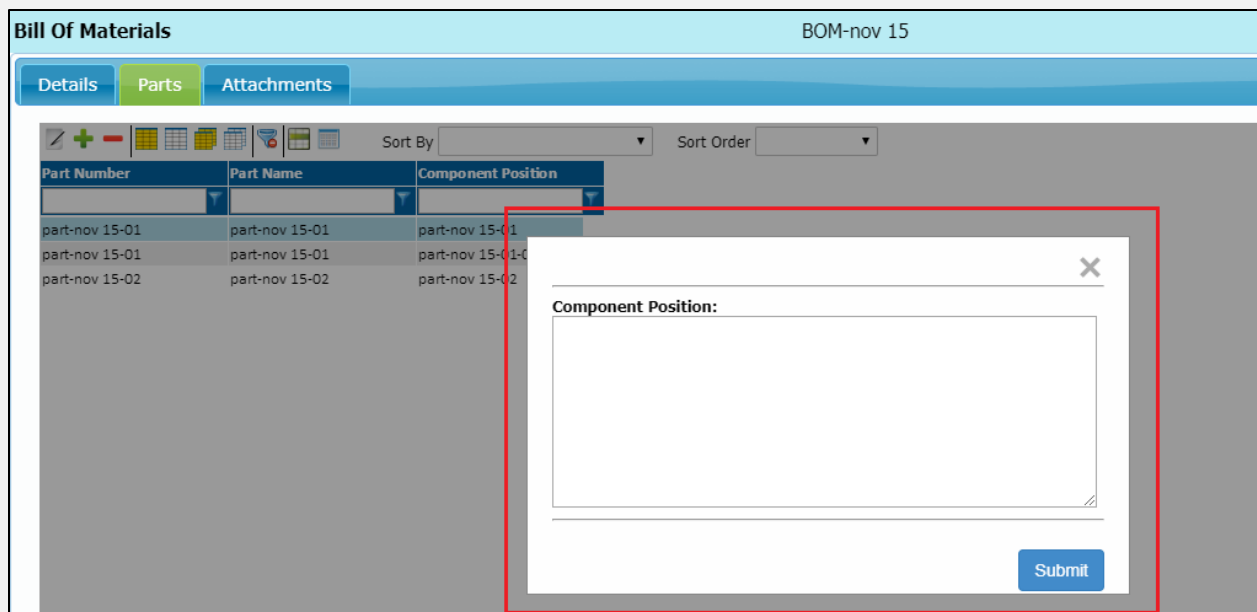## STEP 2 – CREATE BOM AND ADD PARTS WHICH HAVE RUNTIME LIMITS

- The user can add a single part multiple times.
- A new field—*Component Position*—is added and the *Edit* functionality is also added in the **Parts Tab.**

HOW CAN THE USER ENTER DATA IN THE *COMPONENT POSTION* FIELD?

The user will click the *Save* icon. After selecting a part, a window will populate to enter the **component position.**

STEP 3 – CREATE AN ASSET THEN ASSOCIATE THE ABOVE BOM TO IT

NOTE: After the first time, never click the **Save.** Clicking *Save* will cause the data to be reset.

- **Runtime Limit =** Part Runtime Limit that is given in the *Part Details* from the *Part Master* page.
- **Current Component Runtime =** Asset Runtime (*minus)* Asset runtime at last replacement
- **Asset Runtime at Last Replacement =** The value given in Asset Runtime at part replacement (The value will reflect after the work order is closed)
- **Last Replacement Date =** Work Order Closed Date

LOGIC OF BOM – WORK ORDER ENHANCEMENT:

Asset		Associated BOM				
Asset Name	Asset Runtime	Part Number	Current Component Runtime	Asset Runtime at Last Replacement	Runtime Limit	Last Replacement Date
Asset - 01	At the start, it is 0	Part – Nov 15-01	0-0=0	0	110	
	Change 0 to 100		100-0=100	0	110	
	Change 100 to 110		110-0=110	0	110	
	At the start, it is 0	Part – Nov 15-01	0-0=0	0	110	
	Change 0 to 100		100-0=100	0	110	
	Change 100 to 110		110-0=110	0	110	
	At the start, it is 0	Part – Nov 15-02	0-0=0	0	120	
	Change 0 to 100		100-0=100	0	120	
	Change 100 to 110		110-0=110	0	120	

NOTE: After associating the BOM to Assets, the **Current Component Runtime** will be equal to **Asset Runtime** for the first time (either asset runtime is 0 or 100).

STEP 1

Asset Runtime = 0

Part – Nov 15-01 = 110

Current component runtime will always be equal to →

Asset Runtime (minus) Asset Runtime at Last Replacement

STEP 2

The user will change the asset runtime from 0 to 100, so the current component runtime will be equal to →

Asset Runtime (minus) Asset Runtime at Last Replacement = 100-0 = 100

NOTE: The runtime limit is 110

STEP 3

In the 3rd step, the user will change the **asset runtime** to **110,** so that →

Asset Runtime (minus) Asset Runtime at Last Replacement = 110-0 = 110

That is equal to the runtime limit.

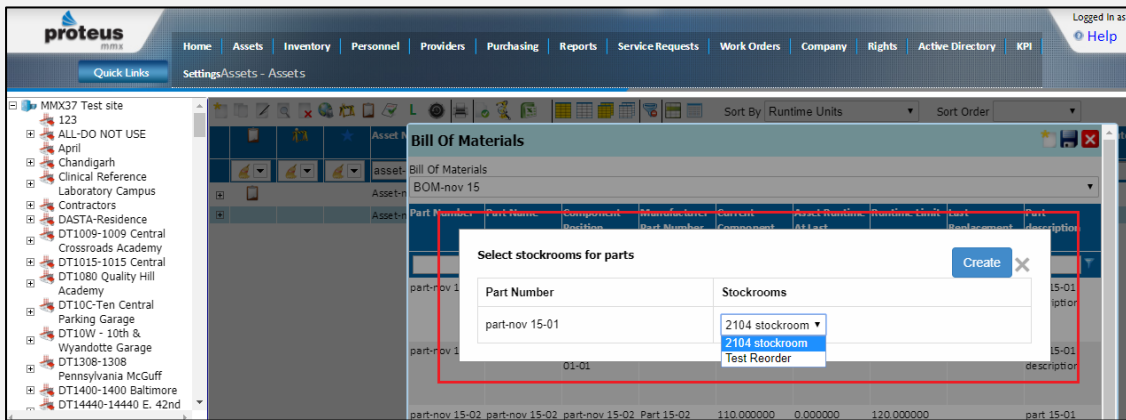The same formula will work for another part; **Part – Nov 15-01 and Part – Nov 15-02**

STEP 4

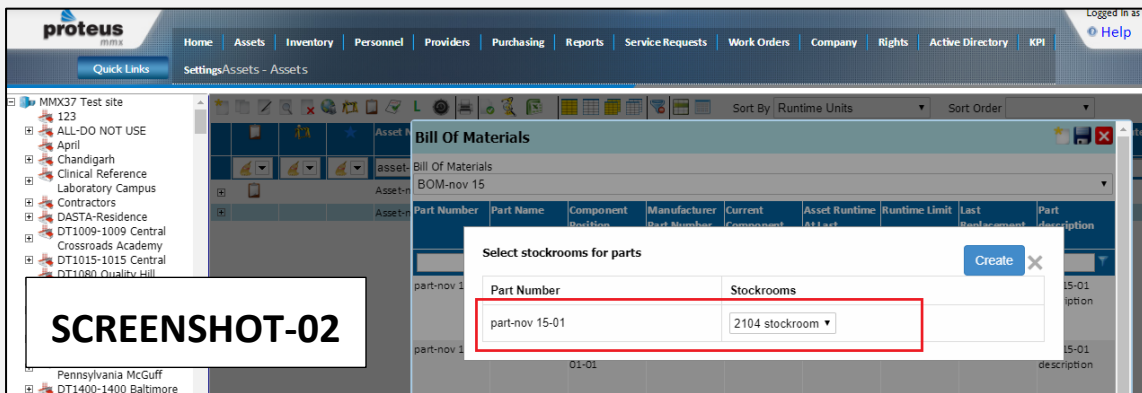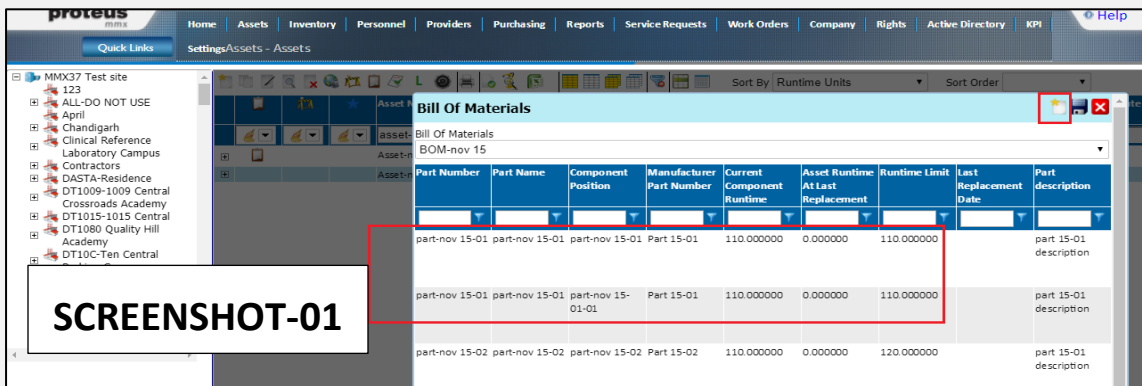Click on the ***New*** icon on BOM screen to create a work order.

As the user clicks on *New,* the below screen will populate.

If one part is added multiple times, then they will require replacement at the same time (**Screenshot-01**). At the time of work order creation, there will only one (1) part and one (1) stockroom for both (**Screenshot-02**).
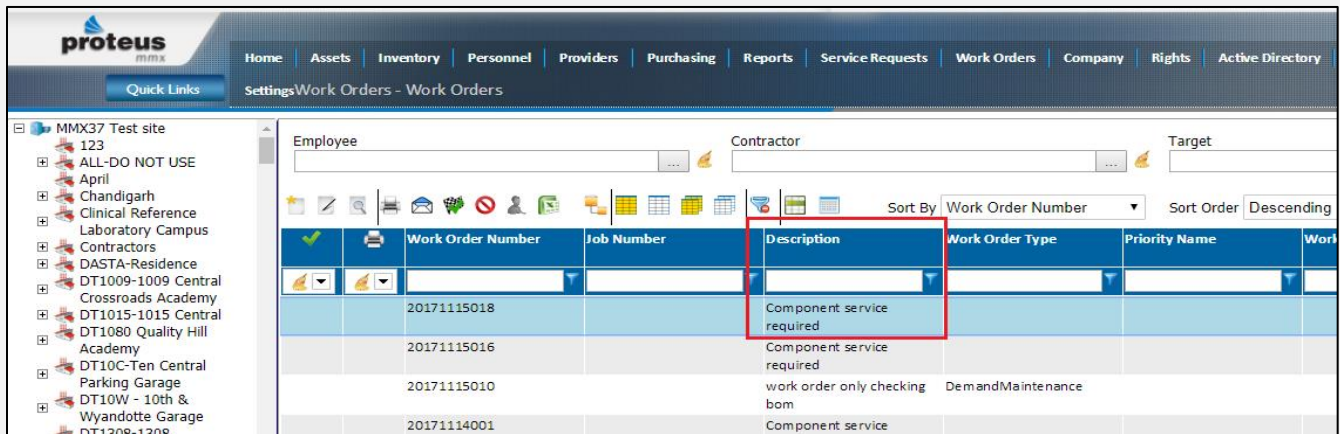

SCREENSHOT-01

SCREENSHOT-02

NOTE: If the part is not in any stockroom, then first add the part to any stockroom, then create the work order.

WORK ORDER CREATED:

For **Replacement Required Part,** select stockroom (if the part is added in multiple stockrooms) then click on *Create* and work order will be created with the description: *"Component service required"*

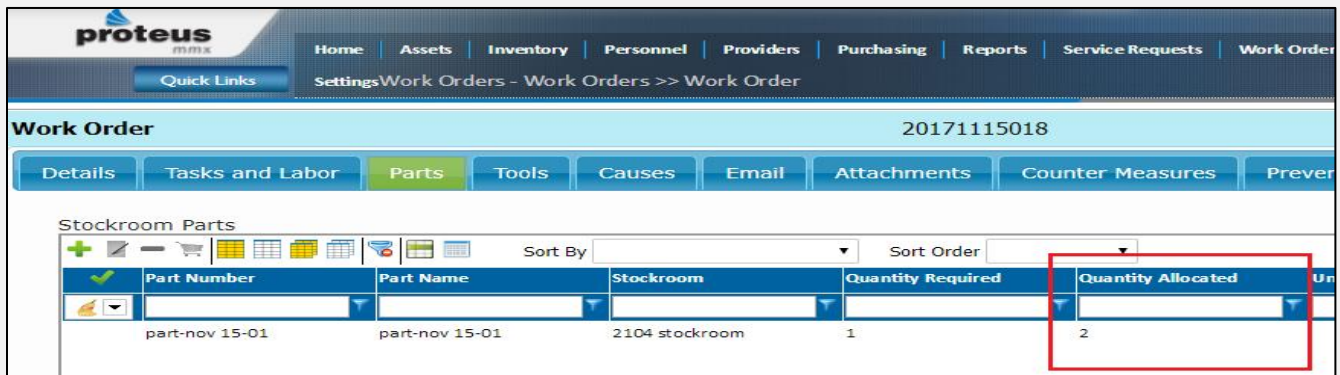**NOTE:** The **Work Order Type** would be *Preventive Maintenance.*

Edit the created work order go to the *Parts Tab.*

Quantity Allocated will be **two (2)** if there are two of the same parts are replaced at the same time. It could be **three (3),** if 3 of the same parts are added.

The **BOM Screen** on the asset will be changed to the one displayed below.

Asset		Associated BOM				
Asset Name	Asset Runtime	Part Number	Current Component Runtime	Asset Runtime at Last Replacement	Runtime Limit	Last Replacement Date
Asset - 01	110	Part – Nov 15-01	0	110	110	WO Closed Date
	Change 110 to 120		120-110 = 10	110	110	
	110	Part – Nov 15-01	0	110	110	WO Closed Date
	Change 110 to 120		120-110 = 10	110	110	
	110	Part – Nov 15-02	110	0	120	
	Change 110 to 120		120	0	120	

NOTE: The *Current Component Runtime* will be updated to 0 because the work order is closed.

Asset Runtime at last replacement will be changed to 110 because it is at asset runtime at the part replacement time.

The **Runtime Limit** will be the same because it is given from the **Part Master Page.**

The **Last Replacement Date** will be the date when the work order is closed.

CASE 02: IF THE WORK ORDER IS NOT CLOSED/CANCELLED

Asset		Associated BOM				
Asset Name	Asset Runtime	Part Number	Current Component Runtime	Asset Runtime at Last Replacement	Runtime Limit	Last Replacement Date
Asset - 01	110	Part – Nov 15-01	0	110	110	WO Closed Date
	Change 110 to 120		120-110 = 10	110	110	
	110	Part – Nov 15-01	0	110	110	WO Closed Date
	Change 110 to 120		120-110 = 10	110	110	
	110	Part – Nov 15-02	110	0	120	
	Change 110 to 120		120	0	120	

The **Current Component Runtime** for **Part – Nov-02** will not be updated to 0 because the work order is not closed/cancelled and the **Asset Runtime at Last Replacement/Last Replacement Date** is also not updated.

As the user increases the **Asset Runtime,** the **Current Component Runtime** will be updated but another work order will not be created for same part until it is closed or cancelled.

NOTE: Until the work order of the related part is closed or cancelled, another work order will not be created for the same part. The user will be notified of this occurrence when they click the *New* button.

SCENARIO 01: PART – NOV 15-01 NEEDS REPLACEMENT AND PART – NOV 15-02 WORK ORDER ALREADY CREATED

Click on *New* to create a work order.

Here, only one part will display because another part's work order is not closed/cancelled.

SCENARIO 02: DELETE PARTS FROM WORK ORDER (CREATED FROM BOM)

1. The *Current Component Runtime* is higher than the **Runtime Limit.**
2. The work order is created but not closed/cancelled.
3. Go to that created work order then *Delete* the added parts.
4. Now, go to *Assets*. At the **BOM** window, click on *New,* then it should allow the user to create a new work order.

SCENARIO 3: CREATE WORK ORDER, THEN ADD BOM PARTS

1. The *Current Component Runtime* is higher than the **Runtime Limit.**
2. The work order is created (suppose it is **WO-01**) but not closed/cancelled
3. Create another work order (suppose it is **WO-02**) from the *Work Order* module, using the same asset that has the **BOM** associated.
4. Now, *Close/Cancel* work order (**WO-02**). It is not created form the **BOM** but it still affects the **BOM.**