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Document Revision History

Ver. No.	Change Information	Author	Reviewed By	Release Date
1.0	Initial Release	Sarbajit Behera	Manjunath H	18-04-2023
1.1	Update the recent changes i.e. Work order number range allocation and consumer complained number on failure entry page.	Sarbajit Behera	Manjunath H	22-05-2023
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Introduction

Distribution Transformers are the primary and costly asset in Electrical power sectors. Most of the power distribution companies will have lakhs numbers of transformers in their respective areas. Most of the time the power got disconnected due to the failure of the transformer or the low maintenance of the transformer. It is very much difficult to analyse the frequency of transformer failures and also have all the records manually. To overcome the difficulties a software has been developed i.e. Distribution Lifecycle Management System (DTLMS

Overview

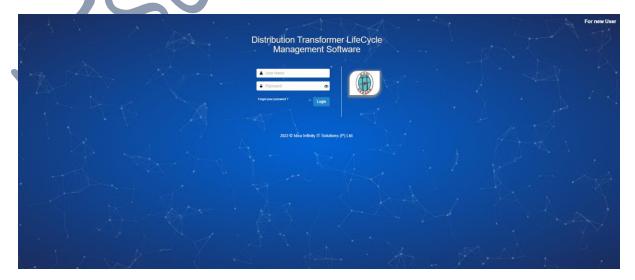
This document is generic user documentation. This document briefs on the highlights of DTLMS application. All application modules are explained in terms of their features and how to use the same. The user can be familiar with application usage and features of DTLMS application referring to this document.

1. Log In

In order to use the DTLMS software, https://hescomdtlms.com one has to login to the system by entering his/her username and password assigned by the administrator. After first login it is advisable to change the password by the user for security purposes. Procedure for changing the

Password is explained later.

To login to the DTLMS click on the link provided in HESCOM website. Following screen is displayed, where in the user has to enter the required username and password. The user will be allowed to perform the roles defined to each person like creation of record, editing the record, approvable.



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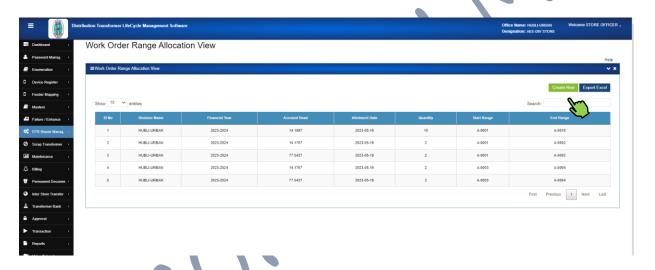


2. Work Order Number Allocation Range:

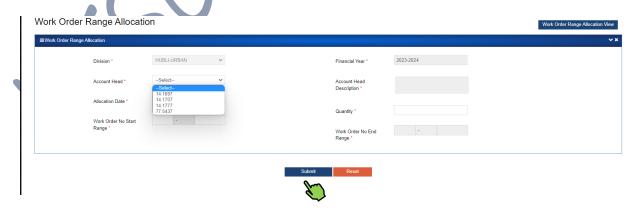
This module is used to allocate the work order number range for creating the failure and enhance work orders. As the allocation the work order number will auto increment up to the end range allocation. This allocation will be done division wise only. The work order number format is one prefix (Optional) hyphen and four-digit numerical number i.e. [A] [-] [0001].

For allocating the work order number range the transformer, User should follow the below steps: Note: - This sub module is only accessible by the AEEO / STO officers.

> Click on the "Work Order Number Range Allocation "sub-module from "Master" module. The following screen is displaying the details of allocated range for the logged in location.



> Click on "New" button as pointed on the above picture
Following screen is displayed for allocating the work order number allocation range



- Select the account head for allocating the range.
- Based the selected account head the description will auto fetch.
- Enter the start range of the work order number allocation.
- Enter the quantity, by default the end range based on the entered quantity.

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Click on Submit button as pointed on the above picture.

The allocation will be forwarded for the next approval to **EE division**.

- The details will be displayed in the approval inbox.
- Ref: Approval Section (Approval In box) for approving the records.

Note: - After allocating the commissioning work order number range, then only system will allow to allocate the decommissioning work order number range.

The EE can modify the end range by clicking on modified and approved button on approval page.

3. Failure / Enhance

This module is used for report failure of distribution transformer, proposal for enhancing, creating estimation, creating Work Order, and creating invoice, approving the return invoice and alternative power supply.

Followings are seven sub modules to report the above functionalities:

- 1. Failure Entry/Enhancement.
- 2. Estimation.
- 3. Work Order.
- 4. Invoice.
- 5. RI Acknowledgement.
- 6. Completion Report

Process of initiating the failure entry and proposal for enhancement is taken up by Section Officer.

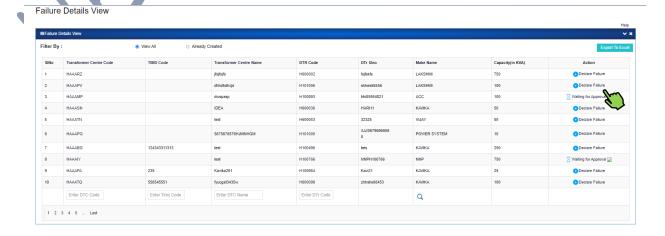
3.1. Failure Entry/Enhancement

For declaring the transformer as failure, User should follow the below steps:

Note: - This sub module is only accessible by the section officer.

Click on the "Failure Entry "sub-module from "Failure/Enhance" module.

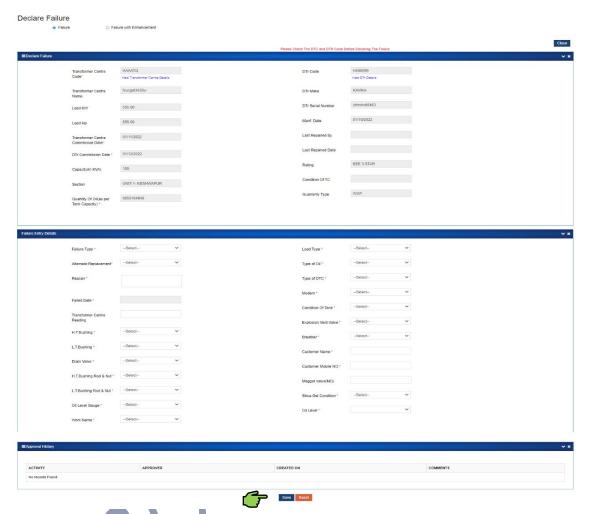
The following screen is displaying the details of the transformer belongs to the log in section officer location.



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> Click on "Declare Failure "action button as pointed on the above picture. Following screen is displayed for with details of the DTC.



- All the mandatory details should be filled by the user.
- > Click on "Save" Button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.
- The four-digit consumer complaint number should be filled by the user.

3.2. Estimation.

For estimating the declared failure transformer, User should follow the below steps:

Note: - This sub module is only accessible by the section officer

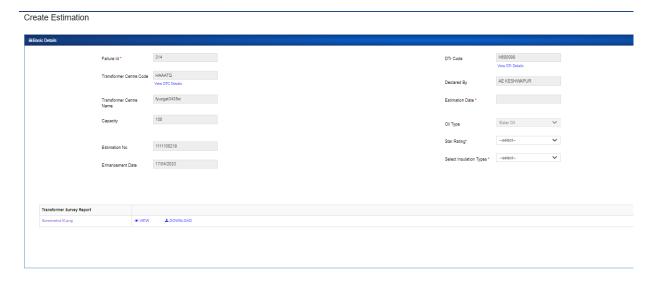
For creating the Estimation user should follow the approval process, Detailed process explained in approval section.

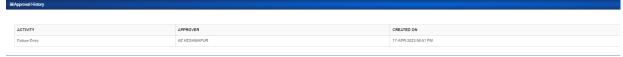
Following screen is displayed for the creating estimation of the declared failure transformer: -

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Submit View Failure Reset

- > All the mandatory details should be filled by the user.
- > Click on "Save" Button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.

The estimation will be forwarded for the next approval to **AEE Subdivision**.

The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records.

3.3.Work Order

For creation of work order of the failure estimation, User should follow the below steps:

Note: - This sub module is only accessible by the AET division officer.

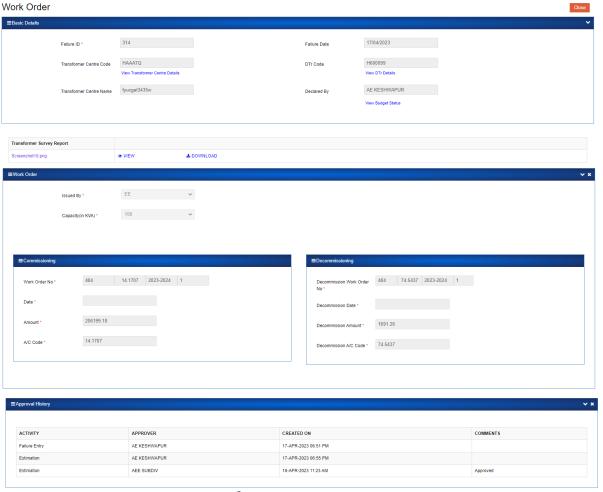
For creating the work order user should follow the approval process, Detailed process explained in approval section.

Following screen is displayed for the creating the work order of the failure estimation: -

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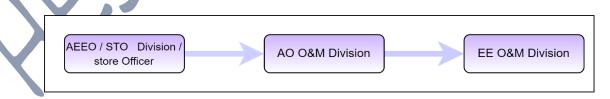
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- > All the mandatory details should be filled by the user.
- > The commissioning and decommissioning work order no will autogenerated.
- > Click on "Save" Button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.

The selected faulty transformers will be forwarded for the next approval as shown in the below flow:



The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records.

Auto Indent and return invoice will be created by the system, parallelly the record will go for creation of return invoice acknowledgement and Invoice against auto RI

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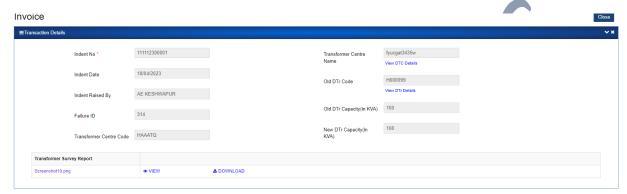
3.4.Invoice.

For creation of invoice against return invoice, User should follow the below steps:

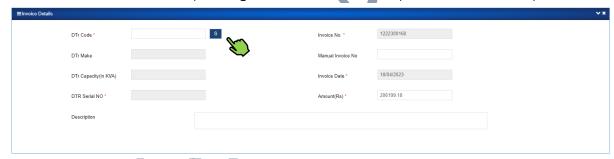
Note: - This sub module is only accessible by the store keeper.

For creating the invoice user should follow the approval process, Detailed process explained in approval section.

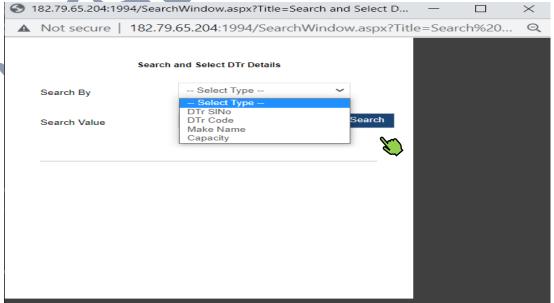
Following screen is displayed for the creating the invoice against the RI: -



> Search the DTR code by clicking on the search button as pointed on the below picture.



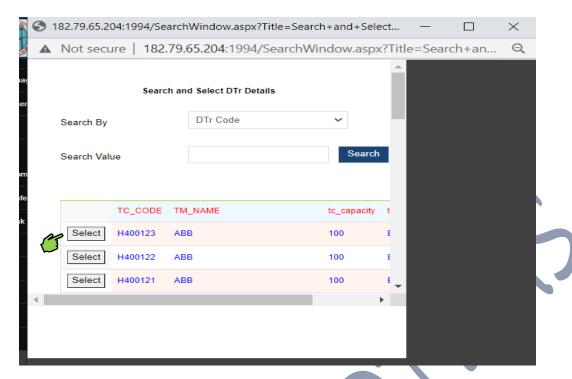
- Select the search by option from the list as for the requirement.
- Click on search button as pointed the below picture.



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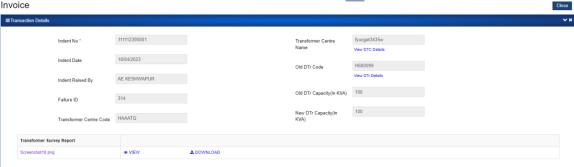
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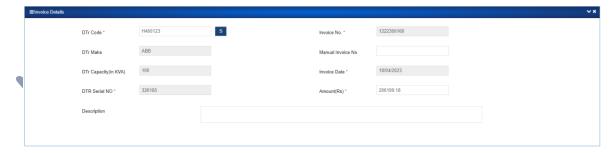




Click on select button as shown in above picture for invoice or issue the as pointed on the above picture

Details of the select transformer will auto fetched and displayed as shown on the below picture:







Approve View Work 0

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- All the mandatory details should be filled by the user.
- Click on "Approve" Button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.
- Enter the vehicle No, Challan Number and Recipient Name for creation of Gate pass.
- Click on "Print Gate Pass" button as pointed on the below picture.



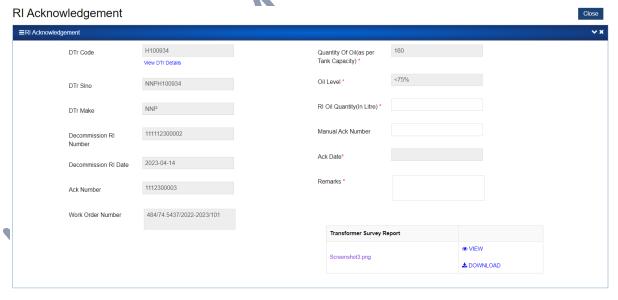
3.5.RI Acknowledgement

For creation return invoice acknowledgement, User should follow the below steps:

Note: - This sub module is only accessible by the store Officer.

For creating the RI acknowledgement user should follow the approval process, Detailed process explained in approval section.

Following screen is displayed for the creating the RI acknowledgment: -







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- All the mandatory details should be filled by the user.
- Click on "Submit" Button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.

The RI acknowledgement will be forwarded for the next approval to **Store Keeper.**

The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records.

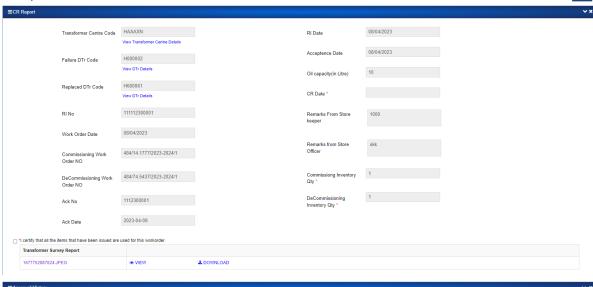
3.6.Completion Report

For creation of completion report, User should follow the below steps:

Note: - This sub module is only accessible by the Section Officer.

For creating the completion report user should follow the approval process, Detailed process explained in approval section.

Following screen is displayed for the creating the completion report: - CR Report







- > All the mandatory details should be filled by the user.
- Click on "Submit" Button as pointed on the above picture.

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- Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.



The selected faulty transformers will be forwarded for the next approval as shown in the below flow:

The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records.

4. Procurement Flow

The procurement process flow is the skeletal framework that outlines how purchasing and procurement occurs for the transformer. This module is used for procuring / purchasing the distribution transformer till it's in-warding in to the store. The flow includes the purchase order, dispatch instructions, TC allotment, Inward flows for completion of the procurement of transformer. Following are the sub-modules to perform the above functionalities:

- Purchase Order
- Dispatch Instructions
- TC allotment
- Inward

4.1.Purchase Order

For creating new purchaser order of transformer, User should follow the below steps:

Note: - This sub module is only accessible by the procurement department.

- Login to DTLMS web application with the username and password.
- > Click on "Masters "module.
- Click on "Purchase Order "sub module.

Following screen is displayed listing all the Purchase orders already fed.

Purchase Order View



Click on "New" button as pointed on the above picture.

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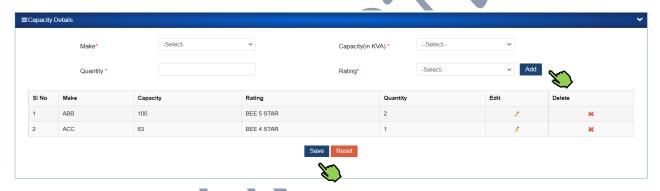


Following screen is displayed for entering the details of the new purchase order



- > All the mandatory details should be filled by the user.
- Click on "ADD" Button as pointed on the above picture.

Details entered are shown in the grid at the bottom of the screen as shown below:



- All the details of the make, capacity and quantity entered is displayed on the grid and user have a provision to delete, if any wrong entry is made by clicking on "X" icon as pointed on the below picture.
- After ensuring the entries made is correct click on "Save" button as pointed on the above picture.
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.

Saved data is displayed. If any modifications are to be made in the already entered data, the same could be modified.

4.2. Dispatch Instructions

For creating new dispatch instruction against the purchase order, User should follow the below steps: Note: - This sub module is only accessible by the procurement department.

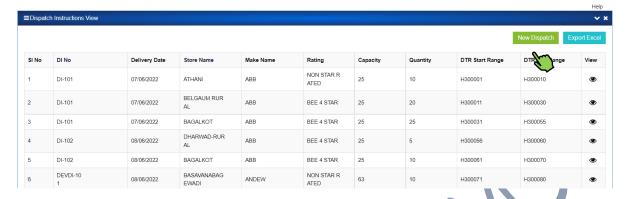
Click "Dispatch Instructions" sub module from "Master" module.

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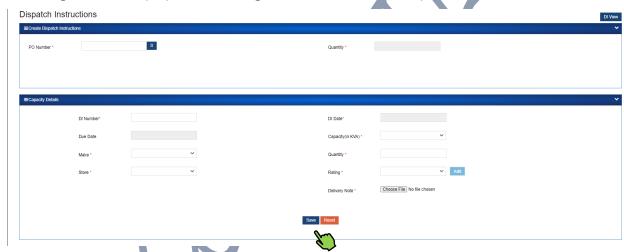
Following screen is displayed to create Dispatch Instructions.

Dispatch Instructions View

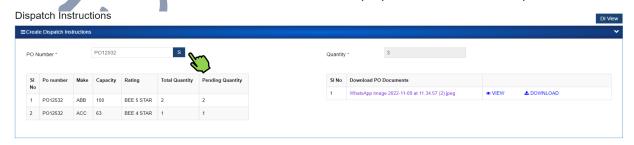


Click on "New" button as pointed on the above picture.

Following screen is displayed for entering the details of the new dispatch instruction.



- > Search PO number as pointed on the above picture.
- Details of the selected Purchase order will be displayed as shown in below picture.

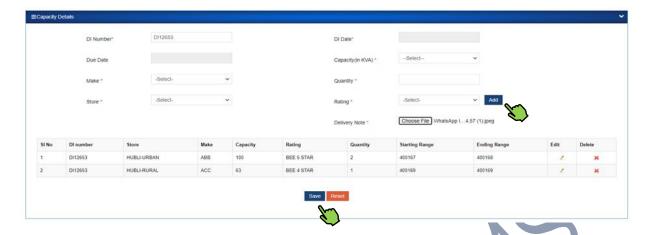


- > All the mandatory details should be filled by the user.
- Click on "ADD" Button as pointed on the above picture.
- Click on "OK" button to save the dispatch instruction.

An upload option of the delivery note is provided which can be later downloaded and viewed. Details entered are shown in the grid at the bottom of the screen as shown below:

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- All the details of the make, capacity, quantity, store name, Rating, Starting Range and Ending Range entered is displayed on the grid and user have a provision to delete, if any wrong entry is made by clicking on "X" icon as pointed on the above picture.
- > After ensuring the entries made is correct click on "Save" button as pointed on the above picture.

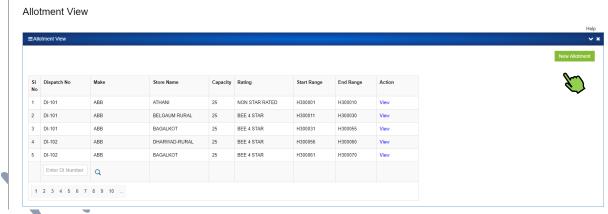
4.3.TC allotment

For creating new TC allotment against the purchase order, User should follow the below steps:

Note: - This sub module is only accessible by the procurement department.

> Click "TC allotment" sub module from "Master" module.

Following screen is displayed to create TC allotment.



Click on "New" button as pointed on the above picture.

Following screen is displayed for entering the details of the new TC allotment.

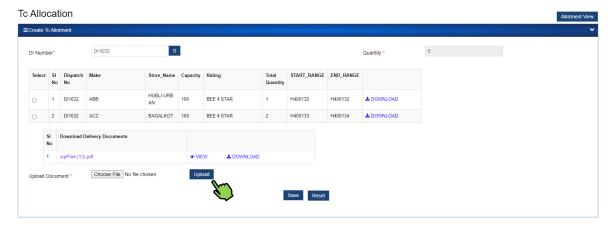


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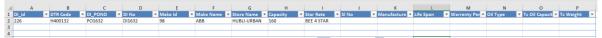


> Search DI number as pointed on the above picture.

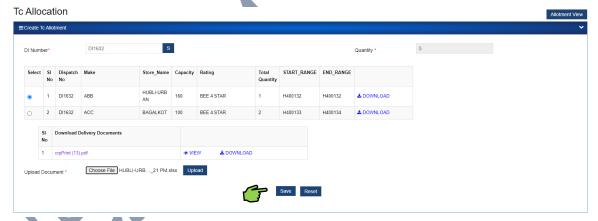
Details of the selected dispatch instruction will be displayed as shown in below picture.



- Click on download as pointed on the above picture for entering the details of the transformer.
- > Enter all the details information of the transformer on the downloaded Excel sheet.



- Click on radio button for the same capacity that user have entered the details.
- > Upload the same file.
- > Click on Upload button.
- Click on save button as pointed on the below picture.



For other transformer allotment process user should follow the same above steps.

4.4.Inward

For creating new Inward against the TC allotment, User should follow the below steps:

Note: - This sub module is only accessible by the Store Keeper.

Click "New DTR Inward" sub module from "Master" module.

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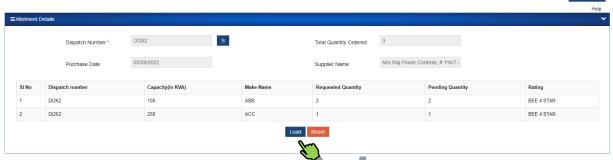
Following screen is displayed to Inward the transformer.

New DTR Inward

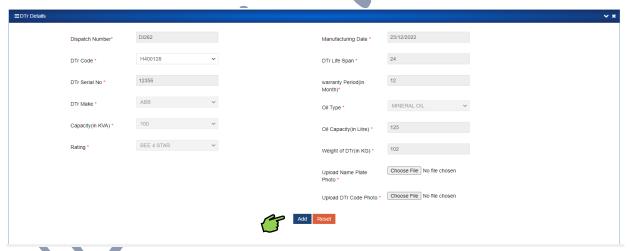


- > Search DI number as pointed on the above picture
- Click on Load button.

New DTR Inward



All the details will be displayed of the Dispatch Instruction as shown on the below picture



- Select the DTR code, as per DTR code the details will be auto filled as shown on the below picture.
- Upload the Name plate photo and Upload DTr code photo.
- Click on "Add" button. Details will be displayed on the screen as shown in below picture.



- Click on "Save" button as pointed on the above screen.
- After saving transformer stock will get updated.

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5. DTR Repairer Management

This module is used to send failed DTR to Repairer / Supplier, checked whether Repaired or not and Repaired DTR delivered to Store. The flow includes estimation of the transformer, work order, issues the transformer, testing of transformer and receive the repaired transformer.

Following are the sub-modules to perform the above functionalities:

- Faulty DTR Search
- · Pending to Test
- Pending to Receive
- Repair PO Details

5.1. Faulty DTR Search

For Faulty DTR Search, the User should follow the below steps:

Note: - This sub-module is only accessible by the AET Division.

> Click on the "Faulty DTR Search "sub-module from "DTR Repair management" module.

The following screen is displayed for a faulty transformer search

Faulty Transformer Search



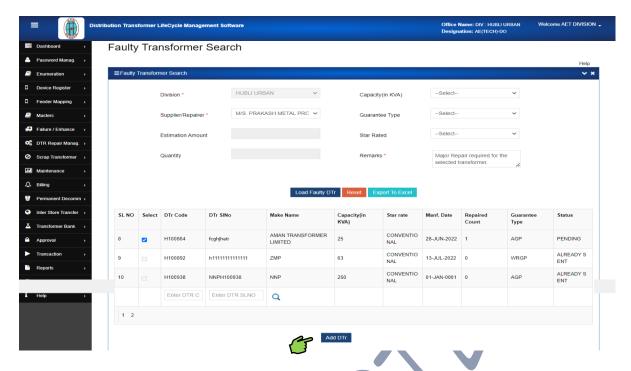
All the mandatory details should be filled by the user.

Proper reasons should be provided by user on selecting the major repairer.

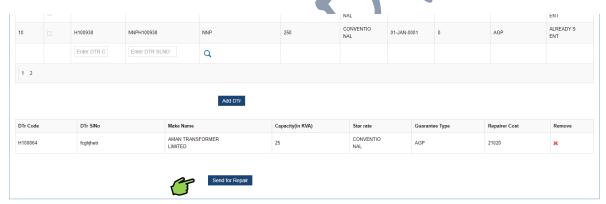
- Click on Load button as pointed on above picture.
- Click on check box to add the transformer for sending to repair as shown in below picture.
- Click on Add Dtr. button.

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All the details will be displayed of selected transformers as shown in the below picture.

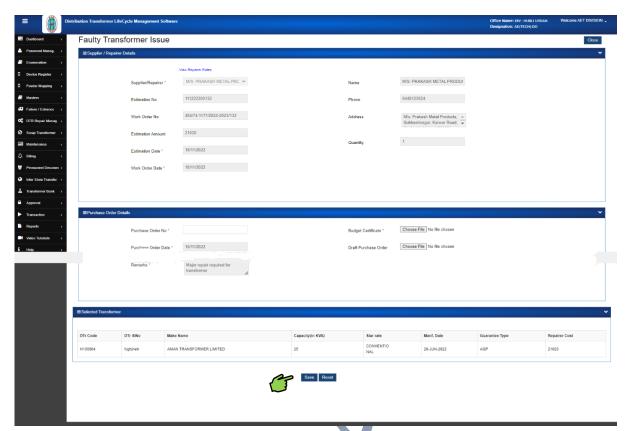


- > Click on send for repair button for sending the transformer to the repair centre as pointed in above picture.
- All the mandatory details should be filled by the user.

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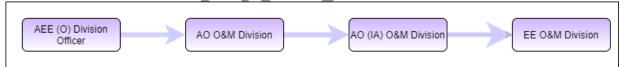
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- > Click on the save button.
- The same should be approved.

The selected faulty transformers will be forwarded for the next approval as shown in the below flow:



The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records

5.2.Invoice

For Invoicing the transformer, the User should follow the below steps:

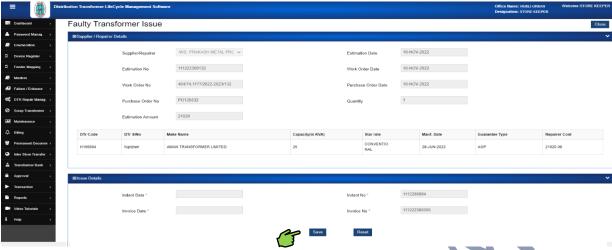
Note: - This sub-module is only accessible by the Store Keeper

For creating the Invoice user should follow the approval process, Detailed process explained in approval section.

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Following screen is displayed for faulty transformer Issue



- All the mandatory details should be filled in by the user.
- Click on Save button as pointed out on the above screen



- Gate pass needs to be created for the issuing of the transformer.
- All the mandatory details should be filled in by the user.
- Click "Print Gate Pass" for printing the Gate pass.

5.3. Pending to Test

For testing the repaired transformer, the User should follow the below steps:

Note: - This sub-module is only accessible by the MT

> Search repair PO number as pointed on the below picture.

Transformer Inspection at Repair Center

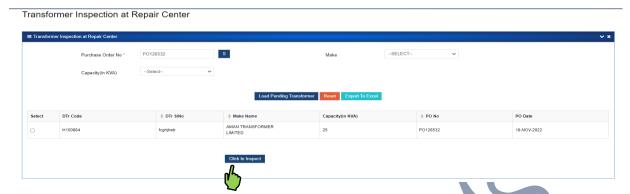


Click on "Load Pending Transformer "button.

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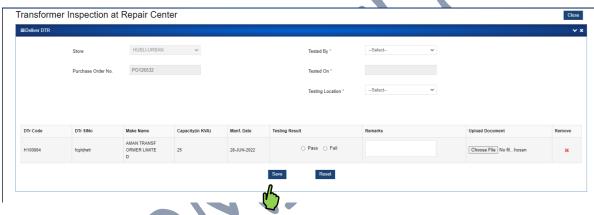


> Details of the selected Purchase order will be displayed as shown in the below picture.



- Select the transformer for testing
- Click on the "Click to Inspect" button.

Details of the selected transformer details displayed on the screen as shown in the below picture



- All the mandatory details should be filled in by the user.
- Select the test result, remark and upload supporting documents.
- Click on the" Save" button.

5.4. Pending to Receive

For Invoicing the transformer, the User should follow the below steps:

Note: - This sub-module is only accessible by the Store Keeper

Click on the "Pending to Receive "sub-module from the "DTR Repair management" module.

The following screen is displayed for receiving the repaired transformer.

> Search repair PO number as pointed on the below picture

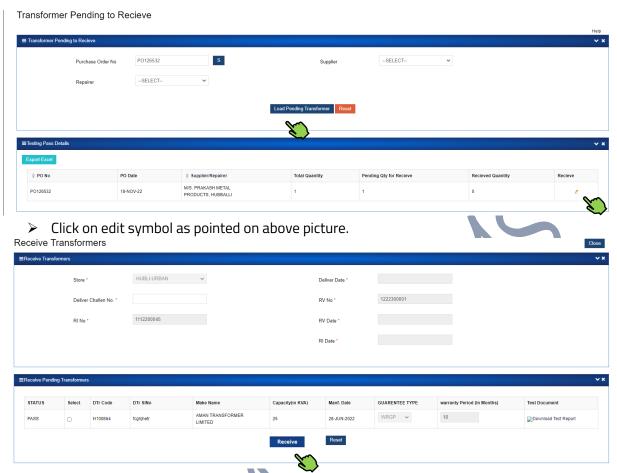


Click on "Load Pending Transformer "button.

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- All the mandatory details should be filled in by the user.
- Click on the "Receive "button.

Repaired good transformers have been updated on the stock.

5.5. Repair PO Details

This sub-module is used to view the details of the repair PO created by the user, User should follow the below steps to view the details:

Note: - This sub-module is accessible to all stakeholders of the DTR Repairer Management process. The following screen is displayed for the faulty view of the details of the repair PO.



- Select the PO No.
- Click on "Load Pending Transformer" button.

Details of repair PO will be displayed on the screen as shown on the above picture.

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6. Scrap Flow

This module is used to declare a transformer as scraped, such transformer cannot be repairable nor reusable in the field. For HESCOM to process this activity we certainly have given a dedicated feature as it follows:

For declaring scrap, the User should follow the below steps:

Note: - This module is only accessible by the Store Keeper.

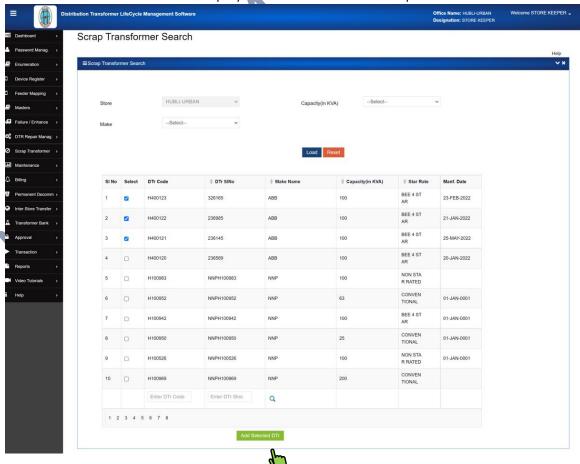
> Click on "Declare Scrap" sub module "from Scrap Transformer" module.

The following screen is displayed for scraping the transformer.



- > Select the store name, Capacity and Make.
- > Click on the load button.

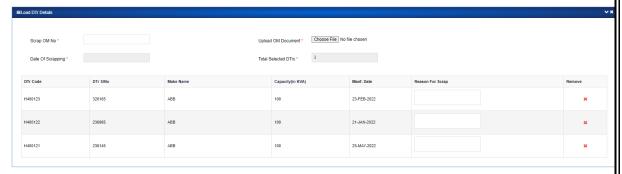
Details of the transform will be displayed as shown on the below picture.



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- Select the DTRS to be declared scrap.
- Click on "Add Selected Dtr" button.





- All the mandatory details should be filled in by the user.
- Click on "Declare Scrap" button.

After declaring transformers as scrap, it will be removed from the stock.

7. Inter Store Transfer

This module is used for the transfer the DTr from one store to another store as requested by the store through the following submodules:

- Store Indent.
- Store Invoice.
- Receive Transformer

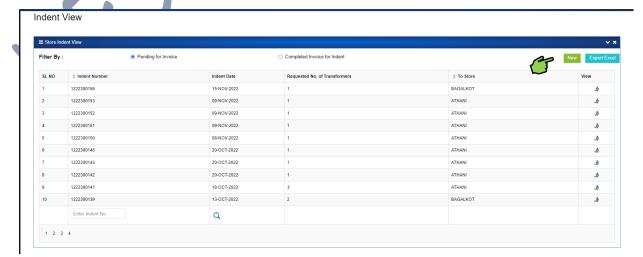
7.1.Store Indent

For creation of the store indent (Requested / From Store), the User should follow the below steps:

Note: - This sub-module is only accessible by the Store keeper.

Click on "Store Indent" sub module from" Inter Store Transfer" module.

The following screen is displayed for store Indent:

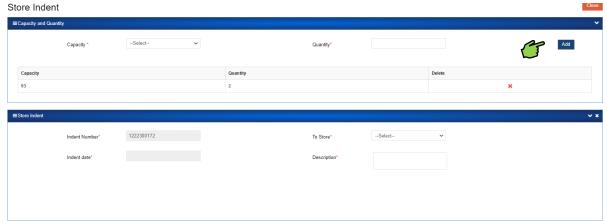


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Click on "New" button as pointed on the above picture.

The following screen is displayed for store Indent (Requesting for the transformer).





- > Select capacity of the request transformer.
- Click on "Add" button as pointed on the above picture.
- Click cross symbol, if anything needs to change.
- All the mandatory details should be filled in by the user.
- Click on "Save" button as pointed on the above picture.

The store indent will be forwarded for the next approval as shown in the below flow:



The details will be displayed in the approval inbox.

Ref: Approval Section (Approval In box) for approving the records

7.2. Store Invoice

For creation of store Invoice (Issuing/To Store), User should follow the below steps:

Note: - This sub module is only accessible by the store Keeper.

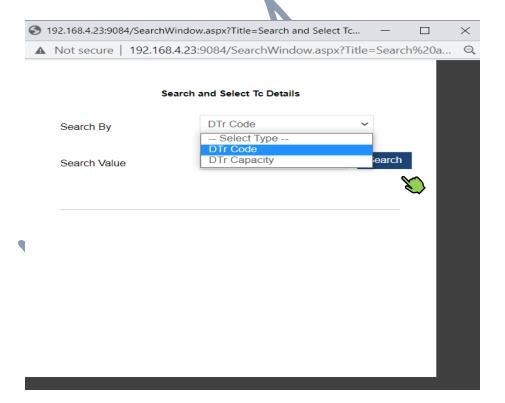
For creating the store Invoice user should follow the approval process, Detailed process explained in approval section.

Following screen is displayed for the creating the store Invoice: -

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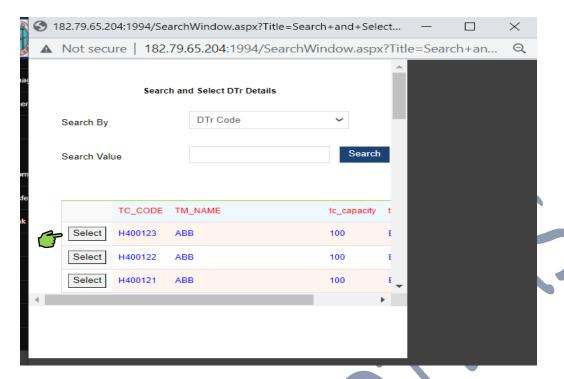
Store Invoice | Indext Information | Indext Date | Island-2023 | Indext Date | Island-2023 | Indext Date | Island-2023 | Island

- All the mandatory details should be filled in by the user.
- > Search the DTR code by clicking on the search button as pointed on the above picture.
- > Select the search by option from the list as for the requirement.
- Click on search button as pointed the below picture.



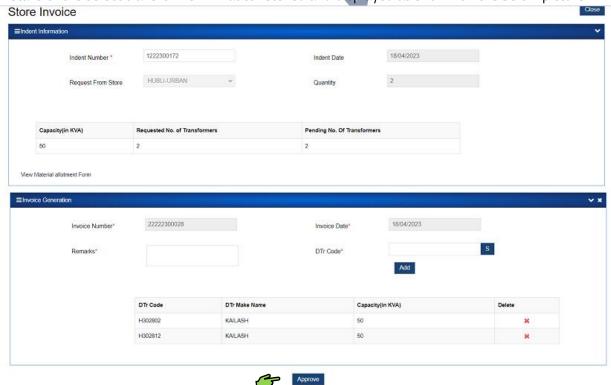
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Click on select button as shown in above picture for invoice or issue the as pointed on the above picture

Details of the select transformer will auto fetched and displayed as shown on the below picture:



- > Click on "Approve" button as pointed on the above picture
- > Saved successfully" message is displayed confirming that the data is saved.
- Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.
- > Gate pass needs to be created for the issuing of the transformer.
- All the mandatory details should be filled in by the user.

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Click "Print Gate Pass" for printing the Gate pass



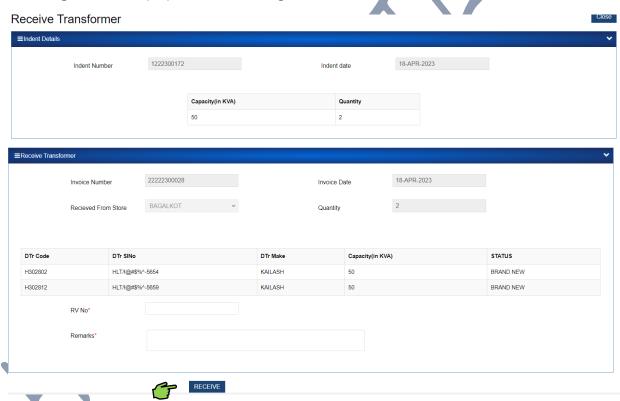
7.3. Receive Transformer

For creation of RV of the receiving transformer, User should follow the below steps:

Note: - This sub module is only accessible by the store Keeper. (Requested / From Store)

For creating the RV user should follow the approval process, Detailed process explained in approval section.

Following screen is displayed for the creating the receive transformer: -



- All the mandatory details should be filled in by the user.
- Click on "RECEIVE" button as pointed on the above picture
- Saved successfully" message is displayed confirming that the data is saved.
- > Confirmation pop up will be displayed, click on "OK" button to close the Pop-up window.

After receiving the requested transformer, the stock will get updated.

8. Approval Inbox

This module is used to approve all the records for approvers.

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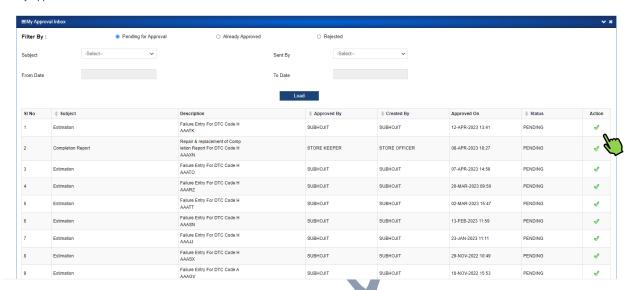


For approving the records, User should follow the below steps:

Note: - This sub module is only accessible by all the users.

> Click on "My Approval Inbox" sub module from" Approval" module Following screen is displayed for approval Inbox: -

My Approval Inbox



Click on action button as pointed on the above picture.

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Thank You HESCOM_DTLMS

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