



# PHARMA DEVILS

ENGINEERING DEPARTMENT

## STANDARD OPERATING PROCEDURE

Department: Engineering	SOP No.:
Title: Preventive Maintenance of Transformer	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

### 1.0 OBJECTIVE

- 1.1 To lay down the Procedure for Preventive Maintenance of Transformer.

### 2.0 SCOPE

- 2.1 This SOP is applicable at.....

### 3.0 RESPONSIBILITY

- 3.1 Assistant – Engineering: To carryout the preventive maintenance activities as per Checklists and schedule.
- 3.2 Executive-Engineering: To ensure the preventive maintenance activities as per schedule.

### 4.0 ACCOUNTABILITY

- 4.1 Head – Engineering

### 5.0 PROCEDURE

#### 5.1 MONTHLY MAINTENANCE

- 5.1.1 Put off the supply to the transformer.
- 5.1.2 Check the Oil level of the Transformer.
- 5.1.3 Clean the body with a dry Cora Cloth.
- 5.1.4 Check for the colour of the silica Gel (Pale Blue)
- 5.1.5 Check for the tap Changer ON and OFF position.
- 5.1.6 Check the all nuts and bolts.
- 5.1.7 Check the tap changer connections and 'V' belt of auto tap changer.

#### 5.2 QUARTERLY MAINTENANCE

- 5.2.1 Operate the Off circuit tap changer for two to three times.



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5.2.2 The links of the off circuit tap changer should be “V” Belted by loosening of nuts on studs and fixed in desired tap position.

### 5.3 YEARLY MAINTENANCE

5.3.1 Check the Oil level in the transformer.

5.3.2 Conduct the Oil filtration by out sourcing.

5.3.3 Mechanical Inspection to be done for buchols relay.

5.3.4 Adjust the float and switches as required.

5.3.5 Check for the cable lugs and terminals.

5.3.6 The diaphragm should be checked and if broken, replace with the same.

5.3.7 Check for the tightness of all bolts and fastener of gasket joints.

5.3.8 Check for the leakages in the joints.

5.3.9 Check for the leakages of the oil.

5.3.10 Check for the badly sealed joints.

5.3.11 Check for the painting on the joints.

5.3.12 If rust or Mud deposited, clean them.

5.3.13 Check for the acidity and sludge.

5.3.14 Check for the die electric strength.

### 6.0 ABBREVIATIONS

6.1 SOP-Standard Operating Procedure



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### 7.0 ANNEXURES

- 7.1 Annexure- I Monthly Preventive Maintenance Check List.
- 7.2 Annexure- II Quarterly Preventive Maintenance Check List.
- 7.3 Annexure-III Yearly Preventive Maintenance Check List.

CHANGE HISTORY		
Supersedes SOP No.	Change Control No.	Changes made
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### ANNEXURE II Quarterly Preventive Maintenance Check List

**Equipment Name:** Transformer  
**Equipment ID :**

for the year of

(Status  $\checkmark$  / X) ( $\checkmark$  - O.K. X - Not O.K.)

S.No.	ACTIVITY	1 <sup>st</sup> Qtr	2 <sup>ND</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr
1	Operate the Off circuit tap changer for two to three times.				
2	The links of the off circuit tap changer should be "V" Belted by loosening of nuts on studs and fixed in desired tap position.				
Done By(Sign):					
Date:					
Checked By(Sign):					
Date:					
Remarks:					



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### ANNEXURE III Yearly Preventive Maintenance Check List

**Equipment Name:** Transformer

for the year of

(Status  $\surd$  / X) ( $\surd$  - O.K. X - Not O.K.)

**Equipment ID :**

S.No.	ACTIVITY	Status ( $\surd$ / X)
1	Check the Oil level in the transformer	
2	Conduct the Oil filtration by out sourcing	
3	Mechanical Inspection to be done for buchholz relay.	
4	Adjust the float and switches as required.	
5	Check for the mercury switch operation	
6	The diaphragm should be checked and if broken, replace with the same	
7	Check for the tightness of all bolts and fastener of gasket joints	
8	Check for the leakages in the joints.	
9	Check for the leakages of the oil.	
10	Check for the badly sealed joints.	
11	Check for the painting on the joints.	
12	If rust or Mud deposited, clean them.	
13	Check for the acidity and sludge.	
14	Check for the die electric strength.	
Done By(Sign):		
Date:		
Checked By(Sign):		
Date:		
Remarks:		