

MAINTENANCE INSTRUCTIONS FOR POWER TRANSFORMERS

Maintenance Schedule

Sl No	Inspection frequency	Items to be inspected	To be checked	Action required if inspection shows unsatisfactory conditions
1	Hourly	Ambient temperature		
2	Hourly	Winding temperature	Ensure that temperature rise is within specified limits.	
3	Hourly	Oil temperature		
4	Hourly	Load (amps)		
5	Hourly	Voltage		
6	Daily	Oil level in transformer	Check oil level gauge	If low, top with dry oil find whether there is any leak.
7	Daily	Oil level in bushing	--	--
8	Daily	Dehydrating breather	Check that air passages are free. Check colour of active agent	If silicagel is pink, change by new charge. The old charge may be reactivated for using again.
9	Daily	Oil level in OLTC conservator	Check oil sight window or oil level gauge	If low, top with new dry oil

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10	Daily	Relief diaphragm of OLTC explosion vent	--	Replace if cracked or broken
11	Daily	Cooler fan, bearing motor & operating mechanism	Check the bearings. Examine contacts, check manual control and interlock	Lubricate the bearing. Replace burnt or worn contacts.
12	Quarterly	Bushings	Examine for cracks and dirt deposit	Clean the dirt. If cracked or broken replace the bushing.
13	Quarterly	Oil in transformer	Check for dielectric strength and water content	Take suitable action to restore quality of oil.
14	Half yearly or at the end of 5000 operations	Oil in the diverter switch of OLTC	<p>a. Dielectric strength</p> <p>b. Water content</p>	<p>Filter or replace if BDV is less than specified value.</p> <p>Measure the water content using KARL FISHER method. Replace/ recondition if exceeds that limits specified</p>
15	Yearly	Oil in transformer	Check acidity resistivity, tan delta and sludge	Filter or replace
16	Yearly	Oil filled condenser bushing	Refer to the maintenance schedule for OIP condenser bushings	As recommended
17	Yearly	Gasket joints		Tighten the bolts evenly to avoid uneven pressure

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18	Yearly	Cable boxes	Check sealing arrangements and find out whether there is any leak	Replace gasket if leaking
19	Yearly	Relays alarm and other circuits	Examine relay and alarm contacts, their operation fuses etc. check relay accuracy.	Clean the components. Replace contacts and fuse if necessary
20	Yearly	Painting	Rusting/colour	Touch up to be done
21	Yearly	Earth resistance	--	Take suitable action if earth resistance is high
22	After 50000 operations of the OLTC	Arcing contacts	--	Replace if necessary
23	-do-	Lubricating oil in the gear box of driving mechanism	Low oil level	Add or replace with lubricating oil
24	5 yearly	1000 kVA to 2000 kVA	Overall inspection including core and coil	Wash the core and coils with clean oil
	7 – 10 yearly	above 3000 kVA		

Note :

In case of abnormal phenomena occurring during service, inform the manufacturer the exact nature of the phenomena together with the name plate particulars for easy identification.