

Maintenance Test	Liquid filled free breathing Power Transformer			
	Commissioning (Note 1)	In-Service (Note 2)	After protection trip due to system fault (Note 3)	After protection trip due to internal fault (Note 4)
Main Tank				
Tank Pressure	Opt	Opt	Opt	REC
Vacuum	REC	Opt	Opt	REC
Insulation Resistance	REC	AN	AN	REC
Turns Ratio	REC	AN	AN	REC
Winding Resistance	REC	AN	AN	REC
Excitation Current	REC	AN	AN	REC
Cap. & Tan delta (PF)	REC	AN	AN	REC
Oil Quality Tests and DGA	REC	REC	AN	REC
Furan Test	Opt	Opt (Note 5)	Opt	<i>Opt</i>
Partial Discharge	Opt	Opt	Opt	Opt
Induced Voltage	Opt	AN	Opt	REC
FRA	REC	AN	<i>REC</i>	REC
RVM/PDC/FDS	Opt	Opt	Opt	Opt
Core Ground Test	REC	AN	AN	REC
Bushing and Cable Tail				
Contact Resistance	Opt	N/A	N/A	Opt
Thermography	N/A	REC	N/A	N/A
Cap. & Tan delta (PF)	REC	AN	AN	REC
Tan delta tip-up for cable (Note 6)	REC	AN	AN	REC
Partial Discharge for cable/ bus	REC/ Opt	Opt	Opt	REC/ Opt
Insulation Resistance for cable / bus	REC	AN	AN	REC
Continuity and phasing	REC	N/A	N/A	REC
Load Tap Changer				
Oil Quality Tests & DGA for LTC	REC	REC	AN	REC
Contact continuity for LTC	REC	AN	AN	REC
Thermography for LTC	N/A	REC	N/A	N/A
Motor Current Signature Analysis for LTC	REC	AN	AN	REC
Vibration and Acoustic Measurement for LTC	Opt	Opt	Opt	Opt
Gauges, Relays and Cooling System				
Gauges calibration	REC	REC	Opt	REC
Gas Pressure Relay calibration	REC	REC	Opt	REC
Pressure Relief Vent	REC	REC	Opt	REC
Cooling Fan control	REC	REC	Opt	REC
Cooling Pump control	REC	REC	Opt	REC

Notes:

¹Newly installed or repaired units prior to energization

²Condition-based maintenance practice – Oil quality, DGA and Furan Tests shall be carried out at a regular interval and necessity of all other tests shall depend on the assessed condition for free breathing power and distribution transformers. For hermetically sealed distribution transformers the first round of tests after commissioning shall be time based and thereafter the frequency shall depend on the assessed condition.

³After tripping of transformer due to system faults such as overcurrent.

⁴After tripping of transformer due to internal faults such as differential tripping (before repair).

⁵ Furan Testing recommended for GSU and units operated above nameplate.

⁶ IEEE 400 add title