Transformer Startup Checklist

Engineer name: _____ Date: _____

Equipment ID: _____ Site / Substation: _____

Voltage Rating: _____ MVA Rating: _____

Manufacturer / model: _____ Manual / drawing revision: _____

Approved work scope / plan: _____ Equipment state / access scope: _____

Original report references: _____ Method / measurement point: _____

Load / ambient context: _____ Instrument / calibration reference: _____

User criteria document / locator: _____ Baseline / comparison context: _____

Approved scope and installed components govern applicability. No normal ranges, acceptance values, test settings, intervals or work authorization. Condition OK is a user judgement under external approved criteria. Evidence/task/measurement OK means record completeness, not healthy equipment. Leave unknown results blank and explain pending evidence/criteria; N/A requires a reason. Full part-level form, not a configured subset.

PREPARATION & SCOPE						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
1	Record equipment identity, subtype, model and installation location Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
2	Reference current drawings, manufacturer manual revision and approved startup scope Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
3	Record installation, shipping/storage and prior repair discrepancies Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
4	Reference approved work controls, responsible personnel and specialist scope Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
5	Record equipment-specific test methods and instrument/calibration references Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
6	Identify fitted parts, exclusions and separately approved release requirements Task / OK = recording task complete	-	[ ]	[ ]	[ ]	

ENCLOSURE & STRUCTURE						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
7	Corrosion, coating damage and impact marks are recorded by location Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
8	Door seals, latches, hinges and covers have documented condition Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
9	Water ingress, condensation and contamination evidence are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
10	Mounting, anchoring and accessible structural supports are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

ENCLOSURE & STRUCTURE						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
11	Enclosure inspection and ingress-control record — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
12	Installation/commissioning evidence for enclosure & structure: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

INSULATING-FLUID SYSTEM						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
13	Fluid type, compartment and service record are identified Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
14	Leak locations at seals, welds, valves and flanges are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
15	Level indication is recorded with load/temperature context Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
16	Sampling and laboratory records preserve sample point, date and method Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
17	Oil temperature indication at the identified sensor; retain operating context Measurement / OK = measurement record complete	_____ °C / °F	[ ]	[ ]	[ ]	
18	Approved fluid laboratory report; retain original quantities and units — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
19	Installation/commissioning evidence for insulating-fluid system: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

WINDINGS						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
20	Winding and phase identification match the reviewed nameplate/drawing Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
21	Accessible winding insulation and lead support condition are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
22	Winding thermal or overload event history is recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
23	Test reports identify tap, winding pair, temperature and instrument Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
24	Approved winding-resistance report — attach the approved report with method, conditions and source reference; only if in scope Measurement / OK = measurement record complete	_____ µΩ / mΩ / Ω	[ ]	[ ]	[ ]	
25	Installation/commissioning evidence for windings: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

CORE & CLAMPING						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
26	Accessible core support and clamping condition are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
27	Core earth connection drawing and inspection evidence are referenced Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
28	Signs of local heating, vibration or displaced components are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
29	Shipping/repair records identify any core or clamp work Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
30	Core and clamping inspection report — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
31	Installation/commissioning evidence for core & clamping: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

INSULATION SYSTEM						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
32	Accessible insulation surfaces are checked for cracking and tracking Condition / OK = user judgement under approved criteria	-	[ ]	[ ]	[ ]	
33	Moisture, contamination and discharge marks are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
34	Insulating barriers and separation discrepancies are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
35	Insulation test reports identify connected equipment and test conditions Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
36	Approved equipment-specific insulation report — attach the approved report with method, conditions and source reference; only if in scope Measurement / OK = measurement record complete	_____ MΩ / GΩ	[ ]	[ ]	[ ]	
37	Installation/commissioning evidence for insulation system: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

POWER CONNECTIONS						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
38	Terminal and conductor identity match the reviewed connection drawing Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
39	Discoloration, insulation damage and heat marks are recorded by terminal Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
40	Conductor support, bend and strain-relief discrepancies are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

POWER CONNECTIONS						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
41	Approved torque/service evidence is referenced without inferring a torque value Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
42	Approved connection-resistance report — attach the approved report with method, conditions and source reference; only if in scope Measurement / OK = measurement record complete	_____ µΩ / mΩ / Ω	[ ]	[ ]	[ ]	
43	Installation/commissioning evidence for power connections: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

BUSHINGS						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
44	Bushing identity and phase/location are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
45	Porcelain/polymer surfaces show documented cracks, chips or contamination Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
46	Oil level indications, seals and flange leak observations are recorded where fitted Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
47	Test tap cap/grounding and diagnostic report references are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
48	Approved bushing-specific diagnostic report; retain method and original units — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
49	Installation/commissioning evidence for bushings: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

TAP CHANGER						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
50	Tap changer model, position and operation count are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
51	Drive cabinet, linkage and position indication condition are documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
52	Separate oil compartment and filter records are referenced where fitted Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
53	Limit, interlock and tap position verification reports are attached Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
54	Tap operation counter reading from the identified mechanism Measurement / OK = measurement record complete	_____ count	[ ]	[ ]	[ ]	
55	Approved tap-position and mechanism verification report — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

TAP CHANGER						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
56	Installation/commissioning evidence for tap changer: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

COOLING & VENTILATION						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
57	Ventilation openings, filters and air paths have documented condition Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
58	Fans, guards and cooler/radiator surfaces are inspected within approved access Condition / OK = user judgement under approved criteria	-	[ ]	[ ]	[ ]	
59	Cooling stage control and alarm evidence are referenced where fitted Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
60	Ambient/load context and sensor location accompany temperature records Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
61	Cooling-system temperature at the identified measurement location Measurement / OK = measurement record complete	_____ °C / °F	[ ]	[ ]	[ ]	
62	Cooling-system functional or temperature report — attach the approved report with method, conditions and source reference; only if in scope Measurement / OK = measurement record complete	_____ °C / °F	[ ]	[ ]	[ ]	
63	Installation/commissioning evidence for cooling & ventilation: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

PROTECTION & INTERLOCKS						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
64	Protective device identity and approved settings revision are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
65	Trip, alarm and interlock reports identify the functions actually tested Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
66	Any inhibited function, override or temporary setting is documented Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
67	Review/disposition references for protection discrepancies are retained Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
68	Approved protection and interlock verification report — attach the approved report with method, conditions and source reference; only if in scope Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
69	Installation/commissioning evidence for protection & interlocks: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

GROUNDING & BONDING						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
70	Protective earth and bonding conductor identification is recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
71	Accessible bonds, clamps and joints show documented condition Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
72	Missing conductors, corrosion and mechanical damage are recorded Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
73	Reviewed earth drawing and continuity measurement locations are referenced Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	
74	Approved bonding-continuity report — attach the approved report with method, conditions and source reference; only if in scope Measurement / OK = measurement record complete	_____ mΩ / Ω	[ ]	[ ]	[ ]	
75	Installation/commissioning evidence for grounding & bonding: drawing/manual revision, as-installed configuration and unresolved punch-list reference Evidence / OK = evidence verified; not equipment health	-	[ ]	[ ]	[ ]	

REVIEW & FOLLOW-UP						
No.	Checkpoint	Value	OK	Not OK	N/A	Remarks
76	Attach original reports, photographs and manufacturer-document references Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
77	Record units, method, conditions and instrument identity for each entered result Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
78	Explain excluded or inapplicable parts and missing evidence Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
79	Record discrepancies and assign follow-up owner and due-date reference Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
80	Record qualified review and separately authorized disposition Task / OK = recording task complete	-	[ ]	[ ]	[ ]	
81	Reference restoration or release records; this checklist does not authorize release Task / OK = recording task complete	-	[ ]	[ ]	[ ]	

Additional remarks / follow-up: _____

Engineer signature: _____ Reviewer / reference: _____

Independent draft. Completion does not certify safety, compliance or fitness for service.