

AUTOMATIC TRANSFER SWITCH PREVENTIVE MAINTENANCE CHECKLIST

Inspection • Mechanical Service • Electrical Verification • Test Records

JOB NO.		PANEL TAG NO.	
PROJECT / AREA		INSPECTION REF.	
NO. OF SECTIONS		DATE	
ATS MAKE / MODEL		RATING / VOLTAGE	

A. VISUAL INSPECTION

S/N	INSPECTION / TEST ITEM	DONE	N/D	REMARK
1	Confirm the equipment tag number against the single-line diagram and approved equipment data sheet.	☐	☐	
2	Verify nameplate data against approved drawings and documentation.	☐	☐	
3	Check internal control and instrumentation terminations for secure, correct connection.	☐	☐	
4	Verify control-wire terminal markings are permanent, legible, and consistent with drawings.	☐	☐	
5	Confirm the installed number of sections and poles is correct.	☐	☐	
6	Verify components (breakers, CT/VT, relays, fuses, controllers and accessories) are correctly installed.	☐	☐	
7	Inspect incoming power connections and lugs for security, damage, discoloration or overheating.	☐	☐	
8	Verify control wiring is correctly routed, identified and protected from sharp edges.	☐	☐	
9	Confirm the enclosure is clean, dry, free of debris, pests, corrosion and foreign objects.	☐	☐	

B. MECHANICAL INSPECTION & SERVICE

S/N	INSPECTION / TEST ITEM	DONE	N/D	REMARK
10	Check positive mechanical and electrical interlocking between normal and alternate sources.	☐	☐	
11	Check accessible cable connections and bus joints for condition and specified torque.	☐	☐	
12	Perform manual transfer operation through the full travel of the mechanism.	☐	☐	
13	Inspect enclosure, buswork, barriers and insulation for physical damage.	☐	☐	
14	Inspect for evidence of moisture, condensation, tracking, corona or contamination.	☐	☐	
15	Clean the enclosure using an approved method and materials.	☐	☐	

B. MECHANICAL INSPECTION & SERVICE — CONTINUED

S/N	INSPECTION / TEST ITEM	DONE	N/D	REMARK
16	Check door locks, hinges, seals, alignment and protective barriers.	☐	☐	
17	Check circuit-breaker / switch mechanism operation (ON-OFF-TRIP as applicable).	☐	☐	
18	Re-torque terminal lugs and busbar joints only to manufacturer values; record exceptions.	☐	☐	
19	Measure contact resistance across bolted connections where required.	☐	☐	
20	Test insulation resistance of bus sections and control wiring as applicable.	☐	☐	
21	Perform electrical checks on instrument transformers where fitted.	☐	☐	
22	Test low-voltage electronic trip units using approved test equipment and settings.	☐	☐	
23	Test medium-voltage protection relays where applicable.	☐	☐	
24	Perform thermal scan before and after maintenance under suitable load, where applicable.	☐	☐	

C. ELECTRICAL & FUNCTIONAL TEST

S/N	INSPECTION / TEST ITEM	DONE	N/D	REMARK
26	Verify continuity of power and control conductors.	☐	☐	
27	Verify overload reset and related control functions operate freely and correctly.	☐	☐	
28	Carry out CT and VT tests; attach controlled test reports to this checklist.	☐	☐	
29	Simulate loss of normal supply and verify automatic transfer to the alternate source.	☐	☐	
30	Restore normal supply and verify automatic re-transfer sequence.	☐	☐	
31	Verify normal-source voltage sensing thresholds and timing.	☐	☐	
32	Verify transfer time delay against approved settings.	☐	☐	
33	Verify alternate-source voltage sensing thresholds and timing.	☐	☐	
34	Verify automatic transfer logic, sequence and indications.	☐	☐	

C. ELECTRICAL & FUNCTIONAL TEST — CONTINUED

S/N	INSPECTION / TEST ITEM	DONE	N/D	REMARK
35	Verify mechanical/electrical interlocks and limit/position switches.	☐	☐	
36	Verify re-transfer timing and cooldown / programmed delays after normal power restoration.	☐	☐	
37	Verify space heaters, thermostats and anti-condensation devices operate correctly.	☐	☐	
38	Carry out insulation resistance test and record results below.	☐	☐	
39	Carry out dielectric withstand (Hi-Pot) test only when specified and approved.	☐	☐	
40	Verify ammeter indication using calibrated current injection, where applicable.	☐	☐	
41	Verify voltmeter indication using calibrated voltage application, where applicable.	☐	☐	
42	Complete a functional test of the control scheme, alarms, indications and remote contacts.	☐	☐	

D. ONE-MINUTE INSULATION RESISTANCE TEST

TEST POINT	TEST VOLTAGE (Vdc)	60 s READING (MΩ)	RESULT	REMARK
A - (B+C+GND)			☐ Pass ☐ Fail	
B - (A+C+GND)			☐ Pass ☐ Fail	
C - (A+B+GND)			☐ Pass ☐ Fail	
A-B			☐ Pass ☐ Fail	
B-C			☐ Pass ☐ Fail	
C-A			☐ Pass ☐ Fail	

Test equipment / model:		Serial no.:		Calibration due:	
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Acceptance: Use the equipment manufacturer's current instructions, approved method statement and applicable project/market standard. Isolate sensitive electronic equipment before testing.

E. DIELECTRIC WITHSTAND (HI-POT) TEST — WHEN SPECIFIED

TEST POINT	RATED VOLTAGE	TEST VOLTAGE	DURATION	LEAKAGE	RESULT
A - (B+C+GND)					☐ Pass ☐ Fail
B - (A+C+GND)					☐ Pass ☐ Fail
C - (A+B+GND)					☐ Pass ☐ Fail

Test equipment / model:		Serial no.:		Calibration due:	
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F. FINAL REVIEW & RELEASE

FINAL CHECK	STATUS / REFERENCE
All covers, barriers and guards refitted	☐ Yes ☐ No ☐ N/A
Tools, jumpers and temporary connections removed	☐ Yes ☐ No ☐ N/A
ATS returned to approved operating mode	☐ Yes ☐ No ☐ N/A
Deficiencies / corrective actions recorded	☐ Yes ☐ No ☐ N/A
Attached reports / photos reference	

COMMENTS / DEFICIENCIES / CORRECTIVE ACTIONS

Performed by / Technician	Quality Control Engineer	Customer / Witness
Name: _____	Name: _____	Name: _____
Signature: _____	Signature: _____	Signature: _____
Date: _____	Date: _____	Date: _____

Safety & standards note: This checklist is a controlled maintenance aid, not a substitute for qualified-person procedures. Apply lockout/tagout, arc-flash controls, manufacturer instructions, calibrated instruments and the standards adopted by the project jurisdiction. Test voltages and acceptance criteria require engineering approval before use.