

# Pre-Commissioning High Voltage Inspection Certificate – Minor Works

**Project Title:** \_\_\_\_\_

The following actions are as prescribed in the relevant High Voltage sections of *220S007B Network Equipment Commissioning Standard – Part B*

1. Check off (✓) each of the following tests as indicated when they have been completed.
2. Note any outstanding defects on the defect form as appropriate and attach to the inspection certificate.
3. Sign and date this certificate and present the completed document to the *Field Switcher* at site to demonstrate that the equipment is ready to be commissioned.
4. **Retain a copy of this form** on your files but also **send the original to Powerco** as prescribed in *360S014 Electricity As-Built Reporting Standard*.
5. **Note: Low Voltage (LV) commissioning works shall be recorded on the applicable LV Commissioning / Testing Certificate 220F028B, 220F028C, 220F028D, 220F028E, 220F028F or 220F028G**

<b>Note:</b> Refer to Standard 220S007B and the summary of pre-commissioning tests and checks for further explanation of the test types required refer to Pages 3 and 4.		High Voltage										Radio Equipment
		Air Break Switch	Surge Arrestor	O/H Distribution Line	O/H Sub-Tran' s. Line	Line Recloser	Voltage Regulators	Ground Mounted HV Switchgear	HV U/G Cables	LV U/G Cables	HV Metering Unit	
<b>Visual Checks</b>	Equipment "Fit For Service" Certificate											
	Contact Alignment											
	Jumpers and Connections - Integrity											
	Busbars, Connections, Etc. Covered											
	Insulators / Bushings Correct											
	Conductor Terminations & Binders											
	Animal Access Barriers											
	RI Mitigation											
	Correct Fusing											
	Earthing and Bonding											
	Conductor Clearances											
	Labelling and Notices											
	Security and Access											
	Radio Equipment Visual Checks											
	Equipment Correctly Installed and Constructed											

**Note:** This 220F028A Certificate is incomplete without completing the remaining checks/tests for Operation, Performance and other on the following Page /2

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Version 4 – 220F028A  
Date Issued 10 July 2025

Note this HV Certificate is incomplete without the preceding list of Visual checks listed on Page 1

<b>Note:</b>		High Voltage											
		Air Break Switch	Surge Arrestor	O/H Distribution Line	O/H Sub-Trans. Line	Line Recloser	Voltage Regulators	Ground Mounted HV Switchgear	HV U/G Cables	LV U/G Cables	LV Metering Unit	Distribution Transformer	Pole Mounted Capacitor
<b>Operation</b>	Manual Operation												
	Automatic Operation												
	Protection Systems												
	Indications & Control												
<b>Performance Tests</b>	Contacts Timing												
	Auxiliary Supplies												
	Earth & Bond Resistance												
	Phasing												
	Phase Rotation												
	Polarity												
	Conductor Continuity												
	Screen/Sheath Continuity												
	Insulation Resistance												
	Hi-Pot												
	Liven Under Test												
	Voltage Level Test												
<b>QA</b>	Construction Standards												
	Safety Standards												
<b>Doc.</b>	As Build Info Recorded												
	Defects Recorded												
<b>Other</b>	(Specify)												
	(Specify)												
	(Specify)												

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**Work Team Leader Name:** \_\_\_\_\_ **Signed:** \_\_\_\_\_

**Competency Cert No:** \_\_\_\_\_ **Date:** \_\_\_\_\_

I as the *Work Term Leader* confirm that the equipment at the above site has passed all its pre-commissioning checks and tests and is fully functional and is now ready to be livened and operated as part of the network.

**Field Switcher Name:** \_\_\_\_\_ **Signed:** \_\_\_\_\_

I as the *Field Switcher* confirm that I have sighted the completed pre-commissioning check sheet and I am satisfied that the equipment is now ready to be livened and operated as part of the network.

**SIN (NAPA ID)** \_\_\_\_\_

A brief summary of the tests and checks that are required to be completed to this Certificate (i.e., on Pages 1 and 2 inclusive) is provided in the following tables.

Tests / Checks	Reference	Requirements / Description
Visual Checks	Equipment "Fit For Service" Certificate	All equipment: poles, crossarm's, insulators, switchgear, transformers, etc, have been tested and are approved for use on Powerco's networks. This applies to new, used and refurbished equipment.
	Contact Alignments	Check that all contacts and arc horns are correctly adjusted as per Appendix 1 of 393S053
	Jumpers & Connection Integrity's	All jumpers and connectors have been selected, installed and tightened correctly.
	Animal Access Barriers	Equipment suitably protected from ingress and damage from rodents, birds, opossums, etc.
	RI Mitigation	Appropriate measures taken to avoid radio interference issues
	Correct Fusing	Fuse protects device and coordinates with upstream fuses
	Earthing and Bonding	Equipment effectively bonded to earth. Equipotential bonding point built into poles.
	Conductor Terminations / Binders	Overhead conductor terminal fittings and binders are compliant with materials and equipment prescribed in 393S013B and its associated standards
	Conductor Clearances	NZECP34 393S008 All conductor clearances meet minimum requirements
	Labelling and Notices	All equipment and operating mechanisms are labeled appropriately, and danger/warning notices attached.
	Security and Access	All doors and cubicles are closed and locked and secured against accidental or unauthorized access. No unauthorised access to overhead line structures. HV and LV cable terminations covered
	Radio Equipment Visual Checks	RFS certification, correct installation of DC supply system, serial / Ethernet cabling, coaxial antenna cabling, surge arresters fitted, antenna fixing and bonding.
	Equipment Correctly Installed / Constructed	Equipment construction / installation complies with site construction drawings.
Operation	Manual Operation	All manual operations can be carried out reliably and in accordance with Manufacturer's operating instructions.
	Automatic Operation	All automatic operations are initiated and operate correctly
	Protection Systems	Protection systems are triggered and operate correctly
	Indications & Control	All local and remote controls and indications operate correctly and accurately.

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A brief summary of the tests and checks that are required to be completed to this Certificate (i.e., on Pages 1 and 2 inclusive) is provided in the following tables

	Auxiliary Supplies		Check all auxiliary supplies supply correct voltage / current.
	Earth and Bond Resistance	393S017	Perform earth test to check that the local earth resistance is less than the minimum requirement (10 ohms unless specified otherwise) for equipment and overhead line structures.
	Phasing	393S010 393S011	Check that each conductor is in phase before connecting
	Phase Rotation	AS/NZS 3017	
	Polarity	393S011	Positive identification of all phase conductors
	Conductor Continuity		Acceptable test results
	Screen/Sheath Continuity	393S011	Bonding correct, acceptable continuity
	Insulation Resistance		Insulation resistance (Megger) test to 5 kV dc for one minute
	Hi-Pot	220S007B	Hi-Pot test results to be within acceptable limits.
	Radio Equipment Performance Tests		Modulation test, RF power emitted test, current draws tests, SWR test
QA	Construction Standards	393S009 and 393S010	Equipment constructed and installed in accordance with appropriate Powerco construction standards and Electricity Regulations.
	Safety Standards		Equipment constructed and installed in accordance with appropriate Powerco safety standards.
Doc	As Build Info Recorded	360S014	All required as-build information (including asset and device details) collected and recorded
	Defects Recorded	220F030	Defects items recorded on defect form and attached to inspection certificate.
Other	(Specify)		
	(Specify)		
	(Specify)		

For more detailed information regarding the tests and checks, refer to the appropriate equipment category in Powerco's *220S007B Network Equipment Commissioning Standard – Part B*