

PEARL Inspect & Test Standards			
LOW VOLTAGE CIRCUIT BREAKER PANELBOARDS	Revision		
	Standard	Number	Date
	1310-I	3	6-2009

This standard is designed to verify that a low voltage circuit breaker panelboard is in a safe and reliable operating condition based upon the design of the original manufacturer at the time of manufacturing. PEARL testing does not verify the claims of the original equipment manufacturer as to the validity of its design criteria. In the event that the device is not in this condition then this standard cannot be used and the PEARL Reconditioning Standard needs to be followed.

PEARL does not warrant, guarantee or make any representation regarding the correctness of specifications, use for any particular purpose, quality or extent of testing, accuracy, or reliability as to any equipment, products or documentation referenced herein.

REFERENCES

The following references are use in this standard. Each of these references can be found in their respective listed locations.

Table References: Section 6000

- Table 1: US Standard bus connection bolt torque values.
- Table 2: Insulation resistance and test values for electrical apparatus.
- Table 11: Insulation resistance and test temperature conversion to 20°C values.

I TEST EQUIPMENT

The following test equipment is required to perform the testing requirements of this standard:

1. Insulation Resistance Test Set (Megohmeter) 1000 Vdc minimum

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II EVALUATION

The following procedures shall be used to determine the condition a low voltage circuit breaker panelboard under this standard.

1 INSPECTION

1.1 Frame/Enclosure

- 1.1.1 Ensure that the nameplate/label data is legible.
- 1.1.2 Ensure that the third party listing service label is legible.
- 1.1.3 Inspect the overall frame for missing screws, bolts, nuts, fasteners, retainers and keepers.
- 1.1.4 Inspect for unused openings.
- 1.1.5 Inspect for improper covers.
- 1.1.6 Inspect for rust and corrosion.
- 1.1.7 Record results on an approved PEARL Evaluation Form.

1.2 Phase Bus

- 1.2.1 Inspect for signs of overheating.
- 1.2.2 Inspect for rust and corrosion.
- 1.2.3 Inspect for missing and defective parts.
- 1.2.4 Inspect insulation structure for signs of overheating and deterioration.
- 1.2.5 Inspect for loose connections.
- 1.2.6 Record results on an approved PEARL Evaluation Form.

1.3 Neutral Bus

- 1.3.1 Inspect for signs of overheating.
- 1.3.2 Inspect for rust and corrosion.
- 1.3.3 Inspect for missing and defective parts.
- 1.3.4 Inspect for loose connections.
- 1.3.5 Record results on an approved PEARL Evaluation Form.

1.4 Ground Bus

- 1.4.1 Inspect for signs of overheating.
- 1.4.2 Inspect for rust and corrosion.
- 1.4.3 Inspect for missing and defective parts.
- 1.4.4 Inspect for loose connections.
- 1.4.5 Record results on an approved PEARL Evaluation Form.

1.5 Bus Support

- 1.5.1 Inspect for signs of overheating.
- 1.5.2 Inspect for signs of deterioration.
- 1.5.3 Inspect for chips, cracks, and broken insulators.
- 1.5.4 Record results on an approved PEARL Evaluation Form.

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1.6 Control Circuits

- 1.6.1** Inspect for signs of deterioration.
- 1.6.2** Inspect for signs of overheating.
- 1.6.3** Inspect for loose connections.
- 1.6.4** Check all interconnecting wiring terminal blocks.
- 1.6.5** Record results on an approved PEARL Evaluation Form.

1.7 Interlocks

- 1.7.1** Check all cabinets for interlock function.
- 1.7.2** Check all Kirk key systems, if applicable.
- 1.7.3** Record results on an approved PEARL Evaluation Form.

2 TESTING

2.1 Insulation Resistance

- 2.1.1** Perform an insulation resistance test at test values specified in Table 2 of Section 6000 as follows:
 - 2.1.1.1** Phase to ground
 - 2.1.1.2** Neutral to ground
 - 2.1.1.3** Phase to neutral
 - 2.1.1.4** Phase to phase
- 2.1.2** Correct for temperature, if necessary (Table 11).
- 2.1.3** Record results on an approved PEARL Evaluation Form.
- 2.1.4** Compare test results to manufacturer's recommendations or Table 2 of Section 6000.

2.2 Torque

- 2.2.1** Check all screw and bolt connections for the proper torque per manufacturer's recommendations or Table 1 of Section 6000.
- 2.2.2** Record results on an approved PEARL Evaluation Form.

3 EVALUATION REVIEW

In order for the device to be eligible for the Inspect & Test Quality Seal, the device needs to have passed all of the preceding Inspection (1) and Testing (2) points. Any failures in the process will require that the device be "Reconditioned" at which time the PEARL Reconditioning Standard needs to be followed.

III PEARL CERTIFICATION

This product has now been inspected and tested and has passed all tests under the PEARL Inspect & Test Standard. The green PEARL Inspect & Test Quality Seal may now be placed on the device.