

PEARL Reconditioning Standards			
LOW VOLTAGE BUS DUCT PLUG-IN TYPE	Revision		
	Standard	Number	Date
	2010	5	11-2008

The term "reconditioning" is defined as "the process of returning electrical equipment to safe and reliable operating condition based upon the design of the original manufacturer at the time of manufacturing."

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 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 reconditioning standard:

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

One of the following pieces of test equipment is required to perform the overpotential testing requirements of this reconditioning standard if it is required by the customer:

1. AC Overpotential Test Set
2. DC Overpotential Test Set

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II RECONDITION EVALUATION

These steps are used to determine what will be required to recondition this product under this standard.

1 INSPECTION

1.1 Frame

- 1.1.1** Ensure that the nameplate data is legible.
- 1.1.2** Ensure that the third party listing service label is legible.
- 1.1.3** Inspect 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** Inspect for missing or defective parts.
- 1.1.8** Record results on an approved PEARL Evaluation Form.

1.2 Insulation Structure

- 1.2.1** Remove bus duct covers
- 1.2.2** Inspect fiberglass tape, heat shrink tubing, or shelving for:
 - 1.2.2.1** Water damage.
 - 1.2.2.2** Deterioration.
 - 1.2.2.3** Overheating
- 1.2.3** Inspect rubber gaskets for flexibility
- 1.2.4** Inspect for missing or defective parts.
- 1.2.5** Record Results on an approved PEARL Evaluation Form.

1.3 Bus Bar/Tube

- 1.3.1** Inspect bus ends for:
 - 1.3.1.1** Corrosion.
 - 1.3.1.2** Overheating.
 - 1.3.1.3** Oxidation.
- 1.3.2** Inspect for proper alignment of each section.
- 1.3.3** Inspect phase separators for:
 - 1.3.3.1** Cracks.
 - 1.3.3.2** Deterioration.
 - 1.3.3.3** Broken Parts
- 1.3.4** Record Results on an approved PEARL Evaluation Form.

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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 phase

2.1.1.2 Phase to neutral

2.1.1.3 Phase to ground

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 Overpotential Test

2.2.1 Perform an overpotential test at 2500 Vdc from phase to ground for 1 minute.

2.2.2 Record results on an approved PEARL Evaluation Form.

2.2.3 Perform an overpotential test at 2500 Vdc from phase to neutral for 1 minute.

2.2.4 Record results on an approved PEARL Evaluation Form.

2.2.5 Perform an overpotential test at 2500 Vdc from neutral to ground for 1 minute.

2.2.6 Record results on an approved PEARL Evaluation Form.

2.2.7 Compare results to manufacturer's recommendations.

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III RECONDITION PROCEDURES

The following procedures are in a recommended order and are required to recondition this product. PEARL recognizes that, based upon actual product design and/or as found condition, some of these procedures may not be applicable. The testing requirement must be completed before the product can be labeled as a PEARL reconditioned product.

1 RECONDITIONING

1.1 Frame

- 1.1.1** Remove all interior parts, if necessary.
- 1.1.2** Clean metal parts of contamination, rust and corrosion.
- 1.1.3** Repair or replace damaged metal parts.
- 1.1.4** Paint parts, if necessary.

1.2 Missing or Defective Components, Parts and Hardware

- 1.2.1** Replace or repair any missing or defective components, parts and hardware found during the inspection phase of this standard.

1.3 Insulation Structure

- 1.3.1** Replace defective or damaged:
 - 1.3.1.1** Fiberglass tape.
 - 1.3.1.2** Heat shrink tubing.
 - 1.3.1.3** Low voltage shelving.
 - 1.3.1.4** Mylar tape

- 1.3.2** Replace missing or defective parts.

1.4 Bus Bar/Tube

- 1.4.1** Replace missing or defective parts.
- 1.4.2** Replate any bus ends, as necessary.
- 1.4.3** Replace any defective phase separators.

1.5 Final Assembly

- 1.5.1** Ensure that the frame/enclosure is plumb and square.
- 1.5.2** Cover unused openings, as necessary.
- 1.5.3** Reinstall all interior parts, if necessary.
- 1.5.4** Replace gasket material.
- 1.5.5** Ensure that the nameplate/label data is complete, correct and legible.

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2.1.1.1 Phase to phase

2.1.1.2 Phase to neutral

2.1.1.3 Phase to ground

2.1.2 Correct for temperature, if necessary (Table 11).

2.1.3 Record results on an approved PEARL Reconditioning Test Form.

2.1.4 Compare test results to manufacturer's recommendations or Table 2 of Section 6000.

2.2 Overpotential Test

2.2.1 Perform an overpotential test at 2500 Vdc from phase to ground for 1 minute.

2.2.2 Record results on an approved PEARL Reconditioning Test Form.

2.2.3 Perform an overpotential test at 2500 Vdc from phase to neutral for 1 minute.

2.2.4 Record results on an approved PEARL Reconditioning Test Form.

2.2.5 Perform an overpotential test at 2500 Vdc from neutral to ground for 1 minute.

2.2.6 Record results on an approved PEARL Reconditioning Test Form.

2.2.7 Compare results to manufacturer's recommendations.

IV PEARL CERTIFICATION

This product has now been reconditioned under the PEARL Reconditioning Standard. The blue PEARL Reconditioning Quality Seal may now be placed on the device.