**Task:** Replacing EMC Front End Electronics Components  

<table>
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<tr>
<th>Sequence of Basic Job Steps</th>
<th>Potential Hazards</th>
<th>Controls &amp; Recommended Actions</th>
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| • Replacing low voltage power supplies | • Trapping of fingers  
• Minor electrical hazards  
• Burning fingers on heat sinks | • Keep fingers clear when replacing supplies  
• Turn off PS and neighbour, or whole crate  
• Keep fingers out of crate. Take care when handling recently removed PS |
| • Connection/disconnection of bias voltage cables in electronics house | • Minor electrical hazards (voltage < 50V, low current) | • Switch off bias voltage before work  
• Keep fingers out of PS |
| • Replacing front end electronics boards:  
  o Working with low voltage electrical devices  
  o Working on manlifts and other elevated platforms  
  o Handling/removing component boards  
  o Use of hand tools | • Minor electrical hazards  
• Falls  
• Pinch/amputation hazards from moving manlift  
• Crushing hazard from moving manlift  
• Bruising and scrapes  
• Stabbing hazard when using screwdriver to remove ADB’s | • Switch off both low voltage and bias power to entire crate being worked on  
• Wear harness where required  
• Take training in use of harnesses in IR-2 hall  
• Do not stand on top step of a ladder  
• Do not work unaided  
• Ensure area below is clear before operating manlift  
• Give verbal warning to those below before operating manlift  
• Keep all body parts away from manlift mechanism at all times  
• Read manual before use of manlift and follow all posted and manufacturer’s instructions |
<table>
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<tr>
<th>Activity</th>
<th>Hazards</th>
<th>Mitigation</th>
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| Care & preservation of front end electronics components | • Shearing cables when replacing boards  
• Overheating of boards during testing  
• Damage to boards and connectors due to use of excessive force | • Take care with sharp edges/connectors  
• Wear protective gloves when removing ADB’s  
• Take Regular breaks during repetitive work  
• Ensure all cables are clear when replacing ADB’s/IOB’s/TRB’s  
• Replace copper heat sink over minicrate when testing recently installed boards  
• Boards should connect easily. The need for force implies an obstacle. Check for bent pins and obstructing cables |
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<th>Acknowledgments</th>
<th>Print Name</th>
<th>Signature or Initialed</th>
<th>Date</th>
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<tbody>
<tr>
<td>Supervisor:</td>
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<td>Participants:</td>
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