Moving forward with MQXFS01

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Tasks:

1. Modify Parts:
   1. Pizza Box and assorted parts
      1. Pizza box will have holes drilled where marked on the magnet side assembly
      2. Additional holes will be added where marked on Pizza Box lid
   2. Lead Supports
      1. Modify Negative lead support
         1. Relocate holes on aluminum clamp to 1cm away from edge.
         2. Remove 4.5mm from the negative lead side to the 220mm mark such that it does not affect transition into bend.
      2. Modify Negative Positive support
         1. Remove 4.5mm from the positive lead side to the 220mm mark such that it does not affect transition into bend.
2. Pre-tin extension leads
   1. Set up solder fixture for tinning extension leads.
      1. Gently clean leads with scotch-brite and alcohol
      2. Mount fixture at 45° in area accessible to tooling and lead such that lead does not have to twist to be soldered.
      3. Place 1st lead in channel with flux and solder cut to fit. Use Kester 1544 flux and 70/30 Pb/Sn solder.
      4. Add aluminum spacer block.
      5. Add remaining lead to solder block with additional flux and solder.
      6. Fill channel adjacent to joint with aluminum filler
      7. Place fixture lid and tighten snug
      8. Insert cartridge heaters and install thermocouple.
      9. Check cartridge heaters continuity to ground before operating.
      10. **Before connecting heaters,** power on solder cart and set set-point to 460°F.
      11. Power off solder cart and connect heaters
   2. Tinning of extension leads.
      1. Gently clean leads with scotch-brite and alcohol
      2. Power on solder cart and heat solder fixture to 460F. When the temperature reaches 460 and the solder has melted, power down fixture and unplug heaters.
      3. Turn cart back on to monitor temperature of the fixture.
      4. When the temperature reaches 250°F, Using heavy leather gloves, disassemble tooling.
      5. When reasonably cool, carefully clean leads with scotch-brite and alcohol.
   3. Repeat for other lead
3. Solder Negative lead
   1. Remove Kapton tape on lead to splice
   2. Set up solder fixture for soldering negative magnet lead
      1. Gently clean leads with scotch-brite and alcohol
      2. Mount fixture at 45° in area accessible to tooling and lead such that lead does not have to twist to be soldered.
      3. Place 1st extension lead in channel with flux and solder cut to fit. Use Kester 1544 flux and 70/30 Pb/Sn solder.
      4. Place 1st magnet lead on top of extension lead with additional flux and solder cut to fit.
      5. Place 2nd extension lead in channel with additional flux and solder cut to fit.
      6. Place 2nd magnet lead on top of extension lead with additional flux and solder cut to fit.
      7. Fill channel adjacent to joint with aluminum filler
      8. Place fixture lid and tighten snug
      9. Insert cartridge heaters and install thermocouple.
      10. Check cartridge heaters continuity to ground before operating.
      11. **Before connecting heaters,** power on solder cart and set set-point to 460°F.
      12. Power off solder cart and connect heaters
   3. Soldering of Negative Magnet Lead
      1. Power on solder cart and heat solder fixture to 460F. When the temperature reaches 460 and the solder has melted, power down fixture and unplug heaters.
      2. Turn cart back on to monitor temperature of the fixture.
      3. When the temperature reaches 250°F, Using heavy leather gloves, disassemble tooling.
      4. When reasonably cool, carefully clean leads with scotch-brite and alcohol.
4. Solder positive lead
   1. Remove Kapton tape on lead to splice
   2. Set up solder fixture for soldering positive magnet lead
      1. Gently clean leads with scotch-brite and alcohol
      2. Mount fixture at 45° in area accessible to tooling and lead such that lead does not have to twist to be soldered.
      3. Place 1st extension lead in channel with flux and solder cut to fit. Use Kester 1544 flux and 70/30 Pb/Sn solder.
      4. Place 1st magnet lead on top of extension lead with additional flux and solder cut to fit.
      5. Place 2nd extension lead in channel with additional flux and solder cut to fit.
      6. Place 2nd magnet lead on top of extension lead with additional flux and solder cut to fit.
      7. Fill channel adjacent to joint with aluminum filler
      8. Place fixture lid and tighten snug
      9. Insert cartridge heaters and install thermocouple.
      10. Check cartridge heaters continuity to ground before operating.
      11. **Before connecting heaters,** power on solder cart and set set-point to 460°F.
      12. Power off solder cart and connect heaters
   3. Soldering of Positive Magnet Lead
      1. Power on solder cart and heat solder fixture to 460F. When the temperature reaches 460 and the solder has melted, power down fixture and unplug heaters.
      2. Turn cart back on to monitor temperature of the fixture.
      3. When the temperature reaches 250°F, Using heavy leather gloves, disassemble tooling.
      4. When reasonably cool, carefully clean leads with scotch-brite and alcohol.
5. Pre-Pizza box electrical checkout
6. Rebuild Pizza Box
7. ?