

Tests for modified A/C unit

Modifications consist of removing supplied thermostat controls and wiring 240V leads from control box direct to compressor, condenser fan and evaporator fans.

1. Do resistance check from AC lines to ground (checking for shorts)
2. Drop into PSI test enclosure (well that WAS the plan)
3. Connect PSI test jig and 12V PSU
4. Confirm all three motors can be switched on and off.
5. Put a 400W heat source (lamp) into the enclosure
6. Use a thermocouple to monitor the enclosure air temperature (location of thermocouple to be determined)
7. Turn on the evaporator fans
8. Turn compressor and condenser fan off
9. Allow enclosure temperature to rise to 45°C (may have to think about letting this go to 60°C in view of MWA request; but need to check that this is possible for A/C, it was never intended to do this)
10. Connect current probe to A/C supply and oscilloscope
11. Turn on condenser fan and compressor – check compressor starts and observe startup current – surge current not to exceed 25 A/C cycles at 20A peak.
12. Leave running for XX minutes – temperature of enclosure to drop below ?? °C
13. Turn off compressor and condenser fan.
14. Allow enclosure temperature to rise to 20°C and start a timer – measure the time it takes to rise to 30°C – not to be less than ?? minutes.
15. End of test