



Technical Service Bulletin

TBJ003

Date: December 20, 2006

Product: CXM circuit boards, ClimateMaster part number 17B0001N01

Effected Range: Units serial numbers G148****– J126****, Built: Nov 14, 2005 – June 30. Effected CXM boards will have a date code range between 0548 and 0627, see picture below for date code location. Control Board date codes are formatted as year/week, i.e. 0612 = 12th week of 2006.

Issue: An abnormally high failure rate of the P1 connector (where the thermostat wires attach) has occurred on CXM boards utilized in the Effected Range of units noted. The P1 solder connections to the CXM board can break loose if excessive torque is applied when connecting thermostat wires into the screw terminals resulting in loss of one or more of the thermostat signals to circuit board. The signal loss may be 100% or intermittent. With this loss, certain modes or components of the unit will not function normally, although the green CXM status light is on and no fault is displayed. Because the loss of connection is between the P1 connector and the board, it may be possible to measure a thermostat control signal at a screw terminal even though it is not making a connection through the board and on to the unit.

The P1 connector on the control board was upgraded July 1st 2006 to a more robust design. The CXM control board part number did not change, the new connector is green in color. The effected connectors are black and fall within date codes listed above. This technical bulletin is intended to be an aid in troubleshooting if you have seen this type of condition.

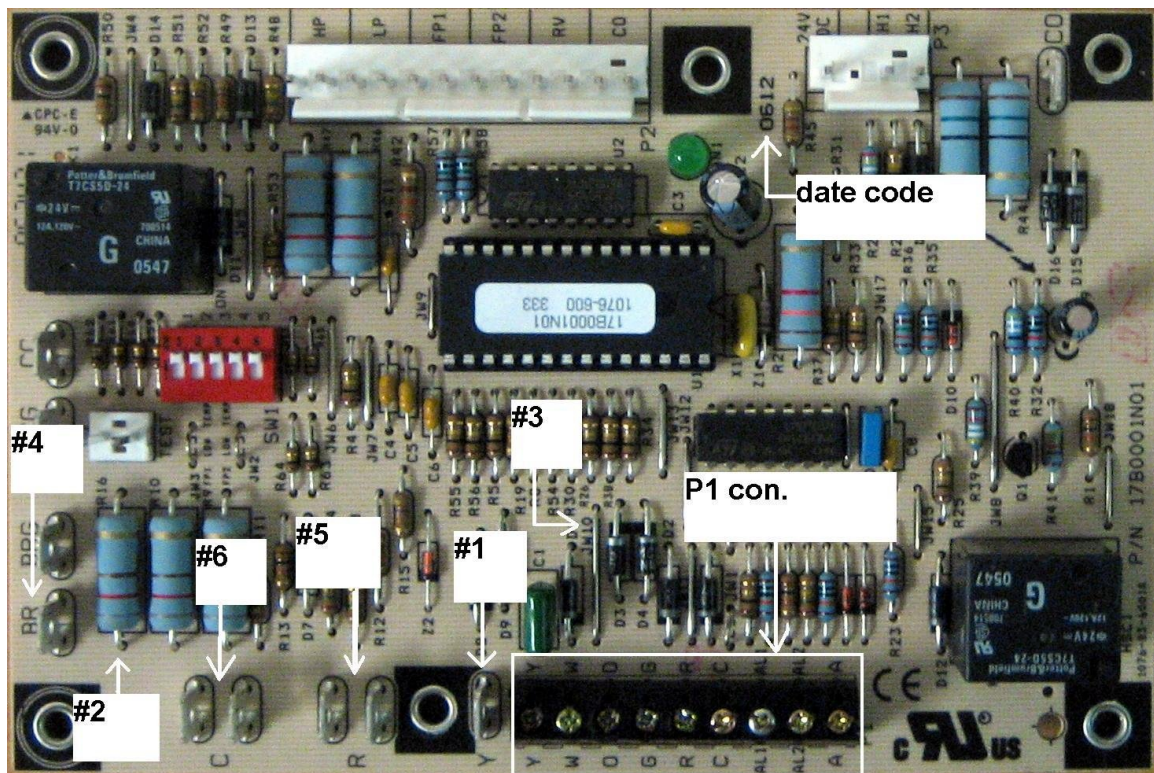
Troubleshooting: Typical symptoms are the loss of a function such as fan, compressor, or reversing valve even though the thermostat signal appears to be present when measured and the CXM status is normal. If a failure is suspected during start up or service of equipment with CXM circuit boards, simple checks can be performed to confirm proper operation of the circuit board.

- First, with supply power on, check for 24 volts between R and C terminals of P1 connector on CXM board, this will confirm proper operation of the transformer.
- If 24 volts is present, check for applicable 24 volt signals in all modes returning from thermostat.
- If all applicable 24 volt signals are not returning from the thermostat to the circuit board, correct those issues before continuing.
- If all applicable 24 volt signals are present, disconnect supply power to unit, leave thermostat wires connected to circuit board and perform the following continuity checks with an Ohm meter.

NOTE: gently wiggle the P1 connector when performing these tests to assure finding intermittent connections.

Refer to below picture:

- P1 “Y” to “Y” quick connect **#1 ON PICTURE**
- P1 “W” to outside lead of R16 **#2 ON PICTURE**
- P1 “O” to JW10 on control (right above “O” terminal) **#3 ON PICTURE**
- P1 “G” to “BR” quick connect **#4 ON PICTURE**
- P1 “R” to “R” terminal cluster **#5 ON PICTURE**
- P1 “C” to “C” terminal cluster **#6 ON PICTURE**



If continuity is measured during these above tests, the P1 connector is not a problem. If Y, R, G or C fail to measure continuity, temporary repair can be made by removing those wires from the P1 connector and attaching them directly to the corresponding $\frac{1}{4}$ " spade terminals on the circuit board. If W or O fail to measure continuity, the board can not be field repaired and must be immediately replaced. If replacement of the control board is necessary, normal warranty guidelines apply.