

## Troubleshooting for a PST/PGT/PSC Common at Tim Hortons or Taco Bell unit

A majority of calls regarding these units are that it is not heating on top/bottom or taking a long time to reach temp.

Display will either show...

- RELAY
- Constant flashing of .17 or any other time
- Pro 1 (terminals E1 & E2 on board) OR Pro 2 (E11&E12) OR Pro3 (E13&E14)      Terminals on board

**I would say about 80% of the time, the problem is with a Probe.**

**ALWAYS ADVISE TO VERIFY PROBE RESISTANCE/CONNECTION FIRST!**

### LABEL AND DESCRIPTION

- E1 and E2—upper left temperature probe input
- E3 and E4—10 V AC power input to control board
- E5 and E6—upper left relay output
- E5 and E7—upper right relay output
- E5 and E8—lower relay output
- E9—unused
- E11 and E12—upper right temperature probe input
- E13 and E14—lower temperature probe input
- E23 and E24—unused

These are 2K probes so at about room temp they should be about 2100 ohms. All probes in the unit should read the same resistance. If any of them is reading far off from the other, its usually the culprit.

The reason the board will flash RELY is because the way this board is set up. If the boards senses a fault in any probe (i.e. Resistance is off, bad connection, broken wire) then it cuts off power to all of the relays, hence the RELY error.

Change probe(s) if resistance is off or any other fault in probe.

**\*\*NOTE\*\* THERE ARE 2 DIFF. TYPES OF RELAYS.**

Check unit.... Is it heating up to temp now?

**AROUND 08/2019 THEY CHANGED TO #2E-Z22595 (SMALLER BLACK ONE)**

If probes are fine and the board is working, **check the relays next...**

**PARTS LIST SHOWS #2E-Z3335 (GREY)**

Are they receiving between 9-12V DC to the relay coils? And 120 or 240V out to the elements?

If so, check the elements. Are they open? Pulling correct amps?

If everything is checking out fine, the only other thing we have been seeing recently is that the transformers are putting out over 13V DC to the board and making the board act odd. So **confirm what you are getting out of the 2ndary side of the transformer.**

The **boards on these units are usually the last to fail**, always question when a tech requests a new board for a warranty unit. If they insist without confirming everything else, just advise them that they will be charged for the board if it is returned to us and we find no fault in the board (*Remember, we request they return the defective board when they submit their claims!*)