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M110.0 P Series Troubleshooting Tips

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Models affected: All P Series Venders.

Reason: To provide Trouble shooting tips for Technicians in the field on potential causes and solutions of packages double vending, jack potting, jamming, motors not running, or vender experiencing cooling issues in P Series Vender(s).

Symptoms covered include:

- Double Vend or more than (1) delivered in a given cycle. Page 2
- Jackpotting packages (2 or more) delivered from all columns. Page 3
- Jackpotting packages (2 or more) delivered from a given column. Page 4
- Jam in a given column. Page 5
- One column listed as "Sold Out" but product is in column. Page 6
- All columns (Vender) listed as "Sold Out" but product is in at least one column. Page 7
- All motors will start to run and stop. Page 7
- Cooling Issues. Page 8

Troubleshooting Information

Vend testing should be performed after each step that an action is carried out.

Symptom – Double Vend or more than one (1) package delivered in a given cycle.

Things to check:

1. Check display before opening main door. Any of the following may indicate that there is a Vend Sensor issue.
 - a. A blinking decimal on the far right side of the Display.
 - b. Sold out reading on the display when a select button is pressed with product available in the column.
 - c. Sold out reading on the display continuously with product available in a column(s).
2. Check Vender is level.
3. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
4. Check the accumulator of the refrigeration system is not touching the Can/bottle chute.
 - a. Carefully adjust as needed to ensure it is not touching.
5. Check the evaporator fan harness is not touching the Can/bottle chute.
 - a. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
6. Check rotor anti theft spring in narrow column rotors
 - a. Repair or replace as needed.
7. Check for debris or foreign objects on or around the load bar.
 - a. Especially to the right side of the load bar.
 - i. This should be checked prior to loading any empty column.
8. If vending cans confirm software revision is 804,920,870.81 or higher.
9. Check for loose or corroded vend sensor connectors
 - a. At the sensor and at the Can/bottle chute.
 - i. Repair, clean, and add dielectric grease as needed.
 - b. Check P5 Connection at Control Board.
 - c. Check connections under Silver Cover in the bottom of the Main Door.
10. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - a. DO NOT USE DROP CORDS.
 - b. DO NOT OVERLOAD OUTLET.
11. Check all ground wire connections between the door and inner door, inner door and cabinet.
 - a. An ungrounded machine may cause problems with the vend sensor.
12. Check the Can/bottle chute assy.
 - a. If the chute becomes extremely wet, it may cause problems with the vend sensor until it is dried.
 - b. Check all screws in the Can/bottle chute are secure and chute is in proper position.
 - c. Check for damage to chute, chute liner, or sensor plate assembly.
 - i. Ensure chute and chute liner are clean and free of syrup or foreign objects.
13. Visually inspect vend sensor.
 - a. If board has syrup from broken packages on it replace the vend sensor.
 - b. Verify Vend Sensor Wiring is correct.
 - i. On Vend Sensor with ground and sense wires the GND (ground wire) connects to the chute, SENS (sense wire) connects to the Vend Sensor Plate.
 - ii. On new Vend Sensor with sense wire only the sense wire is connected to the Vend Sensor Plate.
14. Test Vend Sensor in Vend Sensor (VS) of Diagnostics (DIAG).
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
15. Check Vend Motor.
 - a. Test Motor Home Sensor in diagnostics.
 - b. Check Motor harness connection at motor.
 - c. Check J4 Connection on the Control Board.
 - d. Replace with known good motor.
16. Replace control board.

Symptom – Jackpotting packages (2 or more) delivered from all columns.

Things to check:

1. Check display before opening main door. Any of the following may indicate that there is a vend sensor issue.
 - a. A blinking decimal on the far right side of the display.
 - b. Sold out reading on the display when a select button is pressed with product available in the column.
 - c. Sold out reading on the display continuously with product available in a column(s).
2. Check for correct package set up.
 - a. Check for correct package setting in Column (CL) Programming.
 - b. Check for correct rear spacer setting, check Package Set-up on the Inner Door or refer to Package Vend Test Set Up report from manufacturer.
3. Check Cabinet
 - a. Vender is level.
 - b. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
 - c. Check the accumulator of the refrigeration system is not touching the Can/bottle chute. Carefully adjust as needed to ensure it is not touching.
 - d. Check the evaporator fan harness is not touching the Can/bottle chute. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
 - e. Check for loose or corroded vend sensor connectors at the sensor and at the Can/bottle chute. Repair, clean, and add dielectric grease as needed.
 - f. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - g. DO NOT USE DROP CORDS.
 - h. DO NOT OVERLOAD OUTLET.
4. Check all Ground Wire Connections, inner door and cabinet.
 - a. Between the Main Door and Inner Door.
 - b. Between the Cabinet Base and the Tank
 - c. From the Control Board to the Main Door
 - d. Wall Outlet.
5. Check the Can/bottle chute assy.
 - a. If the chute becomes extremely wet, it may cause problems with the vend sensor until it is dried.
 - b. Check all screws in the Can/bottle chute are secured and chute is in proper position.
 - c. Check for damage to chute, chute liner, or sensor plate assembly.
 - i. Ensure chute and chute liner are clean and free of syrup or foreign objects.
6. Visually inspect Vend Sensor.
 - a. If board has syrup from broken packages on it replace the vend sensor.
 - b. Verify Vend Sensor Wiring is correct.
 - i. On Vend Sensor with ground and sense wires the GND (ground wire) connects to the chute, SENS (sense wire) connects to the Vend Sensor Plate.
 - ii. On new Vend Sensor with sense wire only the sense wire is connected to the Vend Sensor Plate.
7. Test vend sensor in diagnostics.
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
8. Check Vend Motor.
 - a. Test Motor Home Sensor in diagnostics.
 - b. Check Motor harness connection at motor.
 - c. Check J4 Connection on the Control Board.
 - d. Replace with known good motor.
9. Replace Control Board.
 - a. If vending cans confirm software revision is 804,920,870.81 or higher.
 - b. If New Control Board is installed verify Model Number and Package Setting.

Symptom – Jackpotting packages (2 or more) delivered from a given column.

Things to check:

1. Check display before opening main door. Any of the following may indicate that there is a vend sensor issue.
 - a. A blinking decimal on the far right side of the display.
 - b. Sold out reading on the display when a select button is pressed with product available in the column.
 - c. Sold out reading on the display continuously with product available in a column(s).
2. Check for correct package set up.
 - a. Check for correct package setting in programming.
 - b. Check for correct rear spacer setting.
3. Check Vender is level.
4. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
5. Check the accumulator of the refrigeration system is not touching the Can/bottle chute.
 - a. Carefully adjust as needed to ensure it is not touching.
6. Check the evaporator fan harness is not touching the Can/bottle chute.
 - a. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
7. Check rotor anti theft spring in narrow column rotors
 - a. Repair or replace as needed.
8. Check load bar.
 - a. Check for debris or foreign objects on or around the load bar.
 - i. Especially to the right side of the load bar.
 1. This should be checked prior to loading any empty column.
 - a. Check load bar push arm spring.
 - b. Check Push arm to load bar.
 - c. Check load bar front lock bushing.
9. If vending cans confirm software revision is 804,920,870.81 or higher.
10. Check for loose or corroded vend sensor connectors at the sensor and at the Can/bottle chute.
 - a. Repair, clean, and add dielectric grease as needed.
11. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - a. DO NOT USE DROP CORDS.
 - b. DO NOT OVERLOAD OUTLET.
12. Check all ground wire connections between the door and inner door, inner door and cabinet.
 - a. An ungrounded machine may cause problems with the vend sensor.
13. Check the Can/bottle chute assy.
 - a. If the chute becomes extremely wet, it may cause problems with the vend sensor until it is dried.
 - b. Check all screws in the Can/bottle chute are secure and chute is in proper position.
14. Check the vend motor.
 - a. Test Motor Home Sensor in diagnostics.
 - b. Check Motor Connection
 - c. Replace with known good motor.
15. Visually inspect vend sensor.
 - a. If board has syrup from broken packages on it replace the vend sensor.
16. Test vend sensor in diagnostics.
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
17. Replace control board.

Symptom – Jam in a given column.

Things to check:

1. Check display before opening main door. The following may indicate that there is a vend sensor issue.
 - a. A blinking decimal on the far right side of the display.
2. Check error codes by opening door and pressing control board service switch.
 - a. If a column is jammed you will get a message “Jammed Column #” or “JC #” where # identifies the column(s) jammed.
3. Check for correct package set up.
 - a. Check for correct package setting in programming.
 - b. Check for correct rear spacer setting.
4. Check Vender is level.
5. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
6. Check the accumulator of the refrigeration system is not touching the Can/bottle chute.
 - a. Carefully adjust as needed to ensure it is not touching.
7. Check the evaporator fan harness is not touching the Can/bottle chute.
 - a. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
8. Check rotor anti theft spring in narrow column rotors
 - a. Repair or replace as needed.
18. Check load bar.
 - a. Check for debris or foreign objects on or around the load bar.
 - i. Especially to the right side of the load bar.
 1. This should be checked prior to loading any empty column.
 - b. Check load bar push arm spring.
 - c. Check Push arm to load bar.
 - d. Check load bar front lock bushing.
9. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - a. DO NOT USE DROP CORDS.
 - b. DO NOT OVERLOAD OUTLET.
10. Check the Can/bottle chute assy.
 - a. Check Can/bottle chute is mounted correctly.
 - b. Check all screws in the Can/bottle chute are secure and chute is in proper position.
11. Visually inspect vend sensor.
 - a. If board has syrup from broken packages on it replace the vend sensor.
12. Test vend sensor in diagnostics.
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
13. Replace control board.

Symptom – One column listed as “Sold Out” but product is in column.

Things to check:

1. Check display before opening main door. Any of the following may indicate that there is a vend sensor issue.
 - a. A blinking decimal on the far right side of the display.
 - b. Sold out reading on the display when a select button is pressed with product available in the column.
 - c. Sold out reading on the display continuously with product available in a column(s).
2. Check for correct package set up.
 - c. Check for correct package setting in programming.
 - d. Check for correct rear spacer setting.
3. Check Vender is level.
4. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
5. Check the accumulator of the refrigeration system is not touching the Can/bottle chute.
 - a. Carefully adjust as needed to ensure it is not touching.
6. Check the evaporator fan harness is not touching the Can/bottle chute.
 - a. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
7. Check rotor anti theft spring in narrow column rotors
 - a. Repair or replace as needed.
8. Check for debris or foreign objects on or around the load bar.
 - a. Especially to the right side of the load bar.
 - i. This should be checked prior to loading any empty column.
9. Check for loose or corroded vend sensor connectors at the sensor and at the Can/bottle chute.
 - a. Repair, clean, and add dielectric grease as needed.
10. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - a. DO NOT USE DROP CORDS.
 - b. DO NOT OVERLOAD OUTLET.
11. Check all ground wire connections between the door and inner door, inner door and cabinet.
 - a. An ungrounded machine may cause problems with the vend sensor.
12. Check the Can/bottle chute assy.
 - a. If the chute becomes extremely wet, it may cause problems with the vend sensor until it is dried.
 - b. Check all screws in the Can/bottle chute are secure and chute is in proper position.
13. Check vend motor.
 - a. Test Motor Home Sensor in diagnostics.
 - b. Replace with known good motor.
14. Visually inspect vend sensor.
 - c. If board has syrup from broken packages on it replace the vend sensor.
15. Test vend sensor in diagnostics.
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
16. Replace control board.

Symptom – All columns (Vender) listed as “Sold Out” but product is in at least one column.

Things to check:

1. Check display before opening main door. Any of the following may indicate that there is a vend sensor issue.
 - a. A blinking decimal on the far right side of the display.
 - b. Sold out reading on the display when a select button is pressed with product available in the column.
 - c. Sold out reading on the display continuously with product available in a column(s).
2. Check for correct package set up.
 - a. Check for correct package setting in programming.
 - b. Check for correct rear spacer setting.
3. Check Vender is level.
4. Check no packages, foreign objects, or other items are being stored under the Can/bottle chute.
5. Check the accumulator of the refrigeration system is not touching the Can/bottle chute.
 - a. Carefully adjust as needed to ensure it is not touching.
6. Check the evaporator fan harness is not touching the Can/bottle chute.
 - a. Harness should be clamped to inner tank wall and held away from Can/bottle chute.
7. Check rotor anti theft spring in narrow column rotors
 - a. Repair or replace as needed.
8. Check for debris or foreign objects on or around the load bar.
 - a. Especially to the right side of the load bar.
 - i. This should be checked prior to loading any empty column.
9. If vending cans confirm software revision is 804,920,870.81 or higher.
10. Check for loose or corroded vend sensor connectors at the sensor and at the Can/bottle chute.
 - a. Repair, clean, and add dielectric grease as needed.
11. Confirm power supply to vender 120VAC (Domestic) on a dedicated 15Amp breaker.
 - a. DO NOT USE DROP CORDS.
 - b. DO NOT OVERLOAD OUTLET.
12. Check all ground wire connections between the door and inner door, inner door and cabinet.
 - a. An ungrounded machine may cause problems with the vend sensor.
13. Check the Can/bottle chute assy.
 - a. If the chute becomes extremely wet, it may cause problems with the vend sensor until it is dried.
 - b. Check all screws in the Can/bottle chute are secure and chute is in proper position.
14. Check vend motor.
 - a. Test Motor Home Sensor in diagnostics.
 - b. Replace with known good motor.
15. Visually inspect vend sensor.
 - a. If board has syrup from broken packages on it replace the vend sensor.
16. Test vend sensor in diagnostics.
 - a. If vend sensor fails during test replace with current vend sensor kit 65107100 (M102.x for instructions).
 - i. If sensor is bad the display will show CS Error or Fail during the diagnostic test.
 - b. If vend sensor passes test and problems continue during normal operation replace with current vend sensor kit 65107100 (M102.x for instructions).
17. Replace control board.

Symptom – All columns (Vender) listed as “Sold Out” but product is in at least one column. Vend Motors will start and stop.

Things to check:

1. Test Motor Home Sensors in diagnostics.
2. Check motors by plugging in motor 1 only and test vend the motor. If the motor runs repeat test on each motor (with only that motor plugged in). When the bad motor is plugged in, the motor will start, and then stop identifying the bad motor.
 - a. Note: Plugging more than 1 motor in at a time could falsely identify a good motor as being bad.

Symptom - Machine does not cool.

Things to check:

1. Check display to see what the temperature is scrolling, if temperature does not scroll, turn on display and sales message in the menu, this will allow the temperature to scroll on the display.
 - a. Displays scrolls 32 degrees- Is temp sensor is plugged if so replace temp sensor.
2. Compressor is not running.
 - a. Is compressor plugged in?
 - b. Plug compressor direct to wall outlet using an extension cord, if it runs and cools there is something wrong in the machine.
 - c. Compressor does not run when plugged direct to wall outlet.
3. Check relay in the relay test in diagnostics, the compressor should run when the #1 is displayed after compressor.
 - a. If the compressor runs in relay test, then replace the temp sensor.
 - b. If the compressor does not run in relay test, check the lights and fan, if they test, then check relay harness, then replace compressor relay.
4. Replace the refrigeration system after checking all the above