CRANE MERCHANDISING SYSTEMS

FACTORY TEST PROCEDURES
COLD DRINK CENTER - FINAL TEST

PURPOSE: The purpose of this qualification test is to ensure the mechanical and electrical operation, and physical appearance of the Cold Drink Center merchandiser.

ASSEMBLY AFFECTED: Cold Drink Center merchandiser, model 327, 328

USAGE: This procedure is used to fill out the Cold Drink Center inspection sheets, part number 3280010.

| REVISION DATE: 06-12-03	
ISSUED BY:	DATE ISSUED:
PROCEDURE WRITTEN BY:	DATE APPROVED:
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NOTE
If the unit is equipped with the printer, DEX, or exec. mech option, it must be checked by the final tester.

1. Perform the continuity/dielectric test. This test must be performed successfully before continuing further in this test.

2. Compare the work order to the machine. Verify that the machine is built and equipped as ordered.

3. Check the alignment of the cabinet door to the machine as well as its proper function.

4. Install the water filter.

5. Install the coin mechanism as required. If a "dumb" coin mech is installed, pre-load the tubes with 2 coins of each denomination.

6. Connect the cold water line to the machine. Turn on the water tap.

7. With the machine power switch set to **OFF**, connect the machine to the appropriate voltage.

8. With the machine turned **ON**, verify that the credit display is illuminated, and that $LED1$ is **ON** and $LED2$ is flashing on the main controller.

   • Verify on both foreign and domestic machines that the fluorescent lamp(s) are **ON**.
   • Load the cup turret(s) with a minimum of 20 cups each. Load the turrets in such a way that the turrets will have to advance.
   • With the door open, the service light and door light should both be illuminated at this time.
   • Press and hold the cabinet service light switch. Verify that the service light goes out.
   • Press the monetary door switch and verify that the cup turrets index and cups fall properly into the cup rings.
   • **Machines with Millennia^TM styling only:** Close and lock the door. Check for any interference on the door trim. Press each of the keys on the selection pad and listen for a beep to indicate a key press, or watch the display for the keys to be displayed. Drop several coins in the coin slot and verify all are credited properly. Press the coin return and check that all coins are returned and that they hit the coin cup properly.

9. Press [EXIT ○ STOP].

10. Press [✳ ☜ ○ START]. The display shows $TEST\ 00$.

11. Press [⬆] 4 times. The display shows *IN - - - - - - - -*. **(Some dashes will be replaced by letters.)** This is input test screen #1. It shows the state of various switches and sensors in the machine. Press [EDIT] to switch to an alternate screen (#2) with different inputs.

Position

Diagram

IN - - - - - - - -

POSITION: 1 2 3 4 5 6 7 8
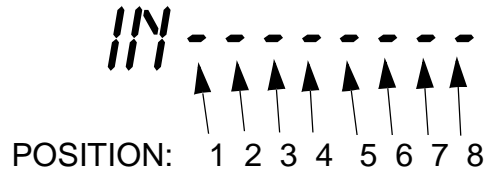
Input Screen #1

- Position 1: Mug switch. If the machine is so equipped, actuating the mug switch will cause the - to be replaced by an *M*.
- Position 2: Key switch. If the machine is so equipped, actuating the free vend key switch will cause the - to be replaced by a *K*.
- Position 3: Waste pail. Raising the waste pail float will cause the - to be replaced by a *P*.
- Position 4: Ice bath probe. If the ice block has formed, the display will show *IN - - - B - - -*. Prior to ice block formation, the display shows *IN - - - . - - -*. The decimal point means that the compressor is running.
- Position 5: Not used.
- Position 6: If the cup 1 position is sold out, the display shows *IN - - - - - 1 -*.
- Position 7: If the cup 2 position is sold out, the display shows *IN - - - - - - 2*.

Input Screen #2

- Position 1: = H = The feeder cup is full.
- Position 2: = L = The feeder cup is empty.
- Position 3: = I = The ice maker is full.
- Position 4: = C = The CO_2 pressure is on.
- Position 5: = Not used.
- Position 6: = H = The carbonator is full.
- Position 7: = L = The carbonator is empty.

12. Verify the carbonator pump has filled the carbonator (the display shows a dash in position 7 and **H** in position 6).

13. Press [EXIT STOP].

14. Check the money box for proper fit.

15. Visually check the machine for any damaged or missing parts. Make note of this on work in process hold form.

16. Press and hold [EXIT STOP]. While holding, press [⬆]. The display shows the software version number.

17. Press [⬇]. The display should show the correct time. Use the number keys to enter the correct time in 24 hour format.

18. Press [⬇]. The display should show the days-of-week with the present day flashing.

    Press [EDIT] to select the correct day of the week.

19. Press [⬇]. The display should show the correct date.

    • Use the number keys to enter the correct date as month, day, and year. Include leading zeros when entering the month and day.

20. Press [⬇]. The display shows *CLEAR ALL*.

21. Press and hold [# CODE CLEAR]. The display shows *CLEARING*. This means that the RAM is being cleared. The display will show *FINISHED* when complete.

22. Press [⬇]. The display shows *DUMB MECH.* Use [EDIT] to select the coin mech.

23. Press [⬇]. The display shows *NO VALDTR.* Use [EDIT] to enable the validator.

24. Press [⬇]. The display shows *NO CARD.* Use [EDIT] to enable the card reader.

25. Press [⬇]. The display shows *GAS PUMP*.

26. Press [EDIT] to switch between *GAS PUMP, DIAPHRAGM 50 HZ*, or *DIAPHRAGM 60 HZ*.

27. Press [⬇]. The display shows *SIX SELECT*. Press [EDIT] to switch between *SIX SELECT* -, and *EIGHT SELECT*.

28. Press ⬇. The display shows *DOOR OFF*. Press [EDIT] to switch between *DOOR ON+*, *DOOR ON-*, and *DOOR OFF*.

29. Press ⬇. The display shows *DSPLY TEST*.

   • Press [✱ TEST START]. All characters on the display should be illuminated.
   • Press the service keys **1** through **0** and "**#**" on the function pad and press each selection key in turn. A beep should occur on every press.

30. Press ⬇. The display shows *CUP TEST*. Press [EDIT] to drop one cup from each position. [PRICE SET], and [2 FREE VEND INSERT] control the individual rings. Adjust the rings as necessary. Drop a minimum of 3 cups from each ring when adjustments are complete.

31. Press ⬇. The display shows *DOOR TEST*. Use [EDIT] to check that the automatic delivery door opens and closes correctly. Adjust if necessary.

32. Press ⬇. The display shows *ICE TEST*. Press [✱ TEST START] to do a test throw. If the ice maker has been running for about 30 minutes or longer, the test throw should produce about 42 grams (1.5 ounces) ± 10 grams (.4 ounces) of good hard clear ice. Check the water level in the feeder cup. Install the adapter "sight window" tubing. Verify that the level is between the lines on the evaporator label. Reinstall the normal tubing.

33. Press ⬇. The display shows *CARB TEST*. Press [✱ TEST START] to purge and refill the carbonator. The refill time will be displayed on the screen. Adjust the carb pump flow until the refill takes 15 to 25 seconds.

34. Press ⬇. The display shows *COLD 12.00*. Press [✱ TEST START] to do a test throw and calibrate. Set the non carb cold water valve to **250 ± 5 c.c**.

35. Press ⬇. The display shows *CARB 12.00*. Press [✱ TEST START] to do a test throw and calibrate. Set the carb cold water valve to **250 ± 5c.c**.

36. Press ⬇. The display briefly shows *SYRUP TEST*. The display will change, depending upon machine configuration:

    - For gas pump machines, the display shows *SYR A   8.00*. You may press [TEST/START] to do a test throw. Set the syrup valve to obtain **50 ± 2c.c**. of syrup. When set, press ⬇ for the next valve. Repeat for all valves. Press [EXIT/STOP] to move to the next item.

    - For diaphragm pump machines, the display shows *S. 12345678*. Press **1** to cycle pump number 1. Adjust the pump for the desired volume. Press 2 - 8 to cycle those pumps. Press [EXIT/STOP] to continue. Press [TEST/START] to cycle all pumps sequentially to prime the lines.

37. Change the selected cup size to match customer order. Press [CODE/CLEAR] to load defaults.

38. Press ⬇. With cups installed, and the waste pail empty, the display should read *IN - - - - - - - -*. (Refer to the position diagram on page 3 for an explanation of these position numbers.) Test all inputs on this screen.

39. Press [EDIT]. The display should read *IN H - - - - - H -*. The dashes represent the 6 positions of the cold system. (Refer to the position diagram on page 3 for an explanation of these position numbers.) Test all inputs on this screen.

40. Press ⬇. The display shows *TEST. 00*.

41. Insert 2 quarters, 3 dimes, and 4 nickels for a credit of $1.00. Press the coin return. Verify the correct change is returned (2 quarters, 3 dimes, 4 nickels).

42. Insert 1 $1 bill for a credit of $1.00, then press the coin return. One of two things will happen:

    a. If a serial validator is installed, the dollar bill will be returned and credit cancelled.
    b. If a pulse validator is installed, the dollar bill will be stacked and the coin mechanism will attempt to pay out a dollar in coins.

NOTE
If the machine is equipped with Debitek, DEX, printer, or any other option,
those options must be verified functionally before signing off the machine.

43. Press ⬇. The display shows *ENGLISH*. Press [EDIT] to select the language for the destination country.

44. Press and hold the door switch to end the test. Verify that the display eventually shows an operational standby message. To perform the Syrup Full Check complete the following: after pumps have pumped to the full position and shut off, press and release the door switch. There should be no error related to syrup sold outs.

45. Release the door switch and press [0 DIAGNOSTICS] if necessary to enter the diagnostics mode. There should be no error messages.

46. Install the cup station in the machine. Adjust the mug sensor accordingly (optional). Manually verify the operation of the delivery door. Check the alignment of the cup station to the door.

    To perform Syrup Empty Check, return to the Syrup Test screen. Pump lines empty by removing lines from water and cycling through the pump sequence as in step #36. After pumping out syrup lines at the end of test, remove the BIB ends from the ends of lines. This allows the syrup pumps to draw a vacuum and displays the syrup sold outs in the empty position. Run each pump until it shows a sold out condition. (#36 in Test procedure), check this by pressing the door switch and verifying that all syrup numbers show as being sold out.

47. Press [* TEST START]. Insert one $1 bill, 2 quarters, 3 dimes, and 4 nickels for a credit of $2.00. (If the machine has no validator, substitute 2 quarters, 3 dimes, and 4 nickels for the dollar bill.)

48. Make a small buy from the "**F**" selection. Verify that the selection performs correctly. $1.40 in change should be returned. Verify that the correct changed is received and falls properly into the coin cup.

49. If the machine is equipped with an optional mug sensor, insert your dark mug and make a selection. Verify the display shows that a mug is "seen".

50. View any diagnostic messages. Correct any errors that are listed.

51. Press [* TEST START], then press and hold the door switch. Vend selection **A3**. Confirm that the machine functions properly. Repeat this step two more times.

52. Remove the cups from the cup drop, empty syrup lines, etc.

53. Payout the remaining coins in the coin mechanism. While paying out, verify that the correct coin pays out for the key pressed. If the unit is equipped with a dumb or MDB coin mech press [9 PAY] then "**1**", "**2**", "**3**" as necessary to recover all coins from the coin mechanism.

54. Check the money box and remove any coins.

55. Remove dollar bill(s) from the validator.

56. Remove the test coin mechanism and test validator as required.

57. **IF EQUIPPED WITH COOL SAN:** After the ice maker fills and turns off with the ice hopper full switch, start a Cool San cycle:

    a. Press [TEST/START], then press [↓] until the display shows *COOL SAN*.

    b. Press and hold [TEST/START]. The Cool San cycle starts.

    During the Cool San cycle, check the pumps for recirculation, and check the feeder cup to see that all water is dumped during cleaning and flush cycles.

58. Disconnect the water line and remove the water filter.

59. **IF NOT EQUIPPED WITH COOL SAN:** Enter the test list by pressing [TEST/START], then press [↑] until the display shows *ICE TEST*. Press [EDIT] to dump the ice maker hopper.

60. Press [↓] until the display shows *CARB TEST*. Press [EDIT] to remove still water from the water lines. When water stops flowing, press [CODE/CLEAR] to empty the carbonator.

    Press [EXIT/STOP] when finished. Turn the CO_2 off to the machine and watch to see if the needle on the gauge moves.

    Complete the balance of this final test (61and 1-7 on SureVend), then return to this position to complete step 60. If the needle doesn't move then no leak is present, but if the needle moves, there is a leak in the machine. Disconnect the CO_2 gas. Repair and recheck. Purge the system of air by discharging the carbonator pressure valve.

61. If the unit is equipped with EXEC, DEX, or printer options, test per procedure 4310048.

NOTE:
Complete all additional steps listed on the checkoff sheet.
This test is to be performed at the end of the factory test for those machines
with the SureVend option.

1. Turn on the machine.

2. Install the cup station.

3. Press [✳ TEST START].

4. Press [⬇] until *CAL.LST XXX* appears.

5. The number *XXX* should be between 150 and 254 to be acceptable with the cup station installed.

6. Place a large cup in the cup station to block the sensor.
    The previous number from #4 above should drop to 10 or less.
    This is acceptable

7. Deviations from any of the above should be brought to the attention of Quality Assurance or Engineering (Dave Whitten)

8. Verify the SureVend insert is present in the monetary door.

END