SC159-04
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Manitowoc® Service Communicator

Subject: S Model Bin Switch Diagnostics

BIN SWITCH FUNCTION

Movement of the water curtain controls bin switch operation. The bin switch has two main functions:

1. Terminating the harvest cycle and returning the ice machine to the freeze cycle. This occurs when the bin switch is opened and closed again within 30 seconds during the harvest cycle.
2. Automatic ice machine shut-off.

   If the storage bin is full at the end of a harvest cycle, the sheet of cubes fails to clear the water curtain and holds it open. After the water curtain is held open for 30 seconds, the ice machine shuts off. The ice machine remains off until enough ice is removed from the storage bin to allow the sheet of cubes to drop clear of the water curtain. As the water curtain swings back to the operating position, the bin switch closes and the ice machine restarts, provide the three-minute delay has expired.

The water curtain must be ON (bin switch closed) to start ice making.

SPECIFICATIONS

The bin switch is a magnetically operated reed switch. The magnet is attached to the lower right corner of the water curtain. The switch is attached to the right bulkhead wall.

The bin switch is connected to a varying D.C. voltage circuit. (Voltage does not remain constant.)

NOTE: Because of a wide variation in D.C. voltage, it is not recommended that a voltmeter be used to check bin switch operation.

SYMPTOMS

Bin Switch Fails Open

- The ice machine will not start with the toggle switch in the ice position, but runs normally with the toggle switch in the clean position.

Bin Switch Fails Closed

- Safety limit 2 is recorded in the control board-memory and the harvest cycle continues after the ice opens and closes the water curtain (harvest cycle is 3.5 minutes long).

DIAGNOSTIC AIDS:

- Always use the water curtain magnet to cycle the switch (a larger or smaller magnet will affect switch operation).
- Readings are affected by your test lead connection and VOM battery strength. Verify you have solid connections and a correctly functioning VOM before testing bin switch.
- Open the curtain for 3 seconds, then close the curtain for 3 seconds. This will allow your VOM display to settle.
- With the bin switch closed your meter reading should be 0 (0 to 10 is acceptable). With the curtain open the reading must be infinity (OL).

CONTINUITY TEST

1. Disconnect the bin switch wires to isolate the bin switch from the control board.
2. Connect an ohmmeter to the disconnected bin switch wires.
3. Cycle the bin switch open and closed 25 times by opening and closing the water curtain. Watch for consistent readings each time the bin switch is cycled open and closed (bin switch failure could be erratic).

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