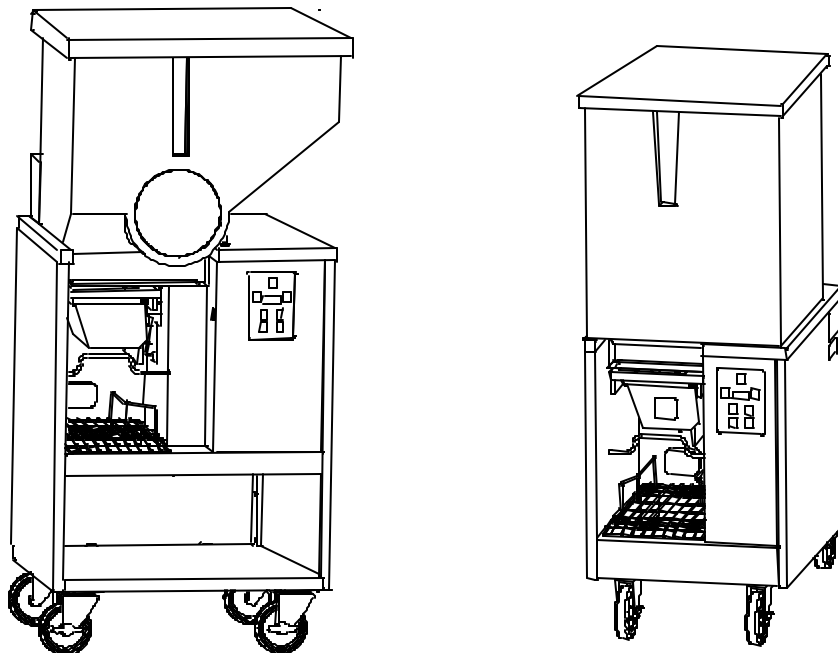


INSTALLATION, OPERATION, SERVICE, AND PARTS MANUAL

[Return to Cover](#)

SINGLE BASKET DISPENSERS



Sin Ba D[®] and Sin Ba D II[®]



Frymaster L.L.C., PO Box 51000, Shreveport, Louisiana 71135-1000

Shipping Address: 8700 Line Avenue, Shreveport, Louisiana 71106

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Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

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Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 1: GENERAL INFORMATION

1.1 Parts Ordering and Service Information

In order to assist you as quickly as possible, the **Frymaster** Factory Authorized Service Center (FASC) or Service Department representative requires certain specific information about your equipment. Most of this information is printed on a data plate affixed to the upper right corner of the right side of your unit. Specific part numbers are listed in Chapter 5 of this manual.

Parts orders may be placed directly with your local FASC or distributor. Included with your unit when shipped from the factory is a list of **Frymaster** FASCs. If you do not have access to this list, contact the **Frymaster** Service Department at 1-800-551-8633.

When ordering parts, the following information is required:

Model Number: _____
Serial Number: _____
Voltage: _____
Item Part Number: _____
Quantity Needed: _____

Service information may be obtained by contacting your local FASC or Distributor. Service may also be obtained by calling the **Frymaster** Service Department at 1-800-551-8633.

When requesting service, please have the following information ready:

Model Number: _____
Serial Number: _____
Voltage: _____

In addition to the model number, serial number, and voltage, please be prepared to describe the nature of the problem and have ready any other information that you think may be helpful in solving your problem.

1.2 Safety Information

Before attempting to operate your unit, read the instructions in this manual thoroughly. Throughout this manual, you will find notations enclosed in double-bordered boxes similar to the one below.



CAUTION boxes contain information about actions or conditions that *may cause or result in a malfunction of your unit.*

WARNING boxes contain information about actions or conditions that *may cause or result in damage to your unit,* and which may cause your unit to malfunction.

DANGER boxes contain information about actions or conditions that *may cause or result in injury to personnel,* and which may cause damage to your unit and/or cause your unit to malfunction.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 1: GENERAL INFORMATION

1.3 Equipment Description

The Single Basket Dispensers (Sin Ba D and Sin Ba D II) are designed to dispense french fries in batches of consistent weight into standard fryer baskets. Sin Ba D II, a follow-on version of the original Sin Ba D design, is identical to the original unit in operation and hopper capacity, but has a smaller cabinet.

NOTE: Unless indicated otherwise, the term Sin Ba D is used throughout this manual to refer to either model.

The units consist of

- a hopper which holds up to 42 lbs/19 kg of fries
- a dispensing chute into which the specified weight of fries for one basket is loaded
- a computer and an operator control panel for controlling operation
- a proximity switch which dispenses the fries into the basket when the basket is inserted beneath the dispensing chute
- a sight-glass for visually monitoring the level of french fries in the hopper.

Additionally, the units are equipped with casters to allow them to be easily moved into position. The front casters are equipped with locking mechanisms to secure the units in place.

The Batch Weight Selectors of your Sin Ba D unit have been factory-programmed with four standard weights, but they may be reprogrammed for other weights. The factory-programmed batch weights of units manufactured for Burger King® are unique to those units. The two sets of factory-programmed weights are listed in the table below. If in doubt as to which model you have, refer to the model number on the rating plate at the rear of the unit. Units manufactured for Burger King® have model numbers beginning with **BK**.

SBD/SBDJ: 1 = 0.50 lb/.23 kg	BKSBD/BKSBDJ: 1 = 1.50 lb/.68 kg
2 = 1.00 lb/.45 kg	2 = 1.25 lb/.57 kg
3 = 1.50 lb/.68 kg	3 = 1.00 lb/.45 kg
4 = 2.00 lb/.91 kg	4 = 0.75 lb/.34 kg

1.4 Installation, Operating, and Service Personnel

Operating information for **Frymaster** equipment has been prepared for use by qualified and/or authorized personnel only, as defined in Section 1.5.

All installation and service on Frymaster equipment must be performed by qualified, certified, licensed, and/or authorized installation or service personnel, as defined in Section 1.5.

1.5 Definitions

QUALIFIED AND/OR AUTHORIZED OPERATING PERSONNEL

Qualified/authorized operating personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions, or who have had previous experience with the operation of the equipment covered in this manual.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 1: GENERAL INFORMATION

QUALIFIED INSTALLATION PERSONNEL

Qualified installation personnel are individuals, firms, corporations, or companies which, either in person or through a representative, are engaged in and are responsible for the installation of commercial electric appliances. Qualified personnel must be experienced in such work, be familiar with all electrical precautions involved, and have complied with all requirements of applicable national and local codes.

QUALIFIED SERVICE PERSONNEL

Qualified service personnel are those that are familiar with **Frymaster** equipment and who have been authorized by **Frymaster** to perform service on its equipment. All authorized service personnel are required to be equipped with a complete set of service and parts manuals, and to stock a minimum amount of parts for **Frymaster** equipment.

A list of Factory Authorized Service Centers (FASCs) is included with your unit when shipped from the factory. ***Failure to use qualified service personnel will void the warranty on your equipment.***

1.6 Shipping Damage Claim Procedure

Your equipment was carefully inspected and packed before leaving the factory. The transportation company assumes full responsibility for safe delivery upon its acceptance of the equipment for transport.

What to do if your equipment arrives damaged:

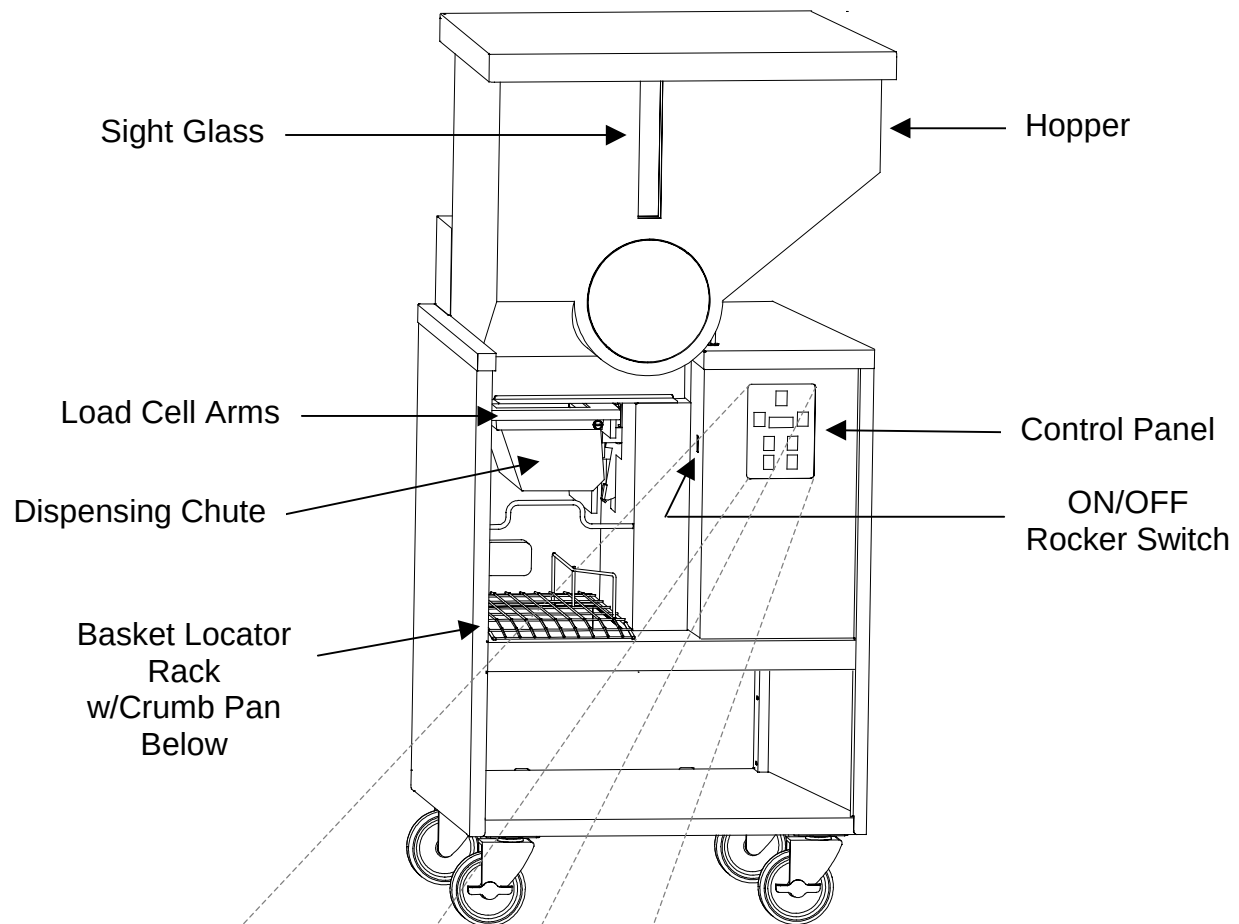
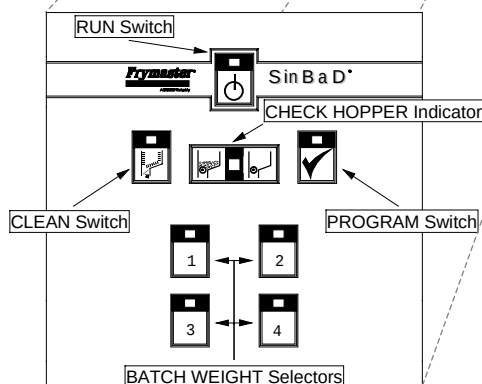
1. **File a claim for damages immediately**, regardless of the extent of damages.
2. **Inspect for and record all visible loss or damage**, and ensure that this information is noted on the freight bill or express receipt and is signed by the person making the delivery.
3. **Concealed loss or damage** that was unnoticed until the equipment was unpacked should be recorded and reported to the freight company or carrier **immediately** upon discovery. A concealed damage claim must be submitted within 15 days of the date of delivery. Ensure that the shipping container is retained for inspection.

<p><u>Frymaster</u> DOES NOT ASSUME RESPONSIBILITY FOR DAMAGE OR LOSS INCURRED IN TRANSIT.</p>

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 2: INSTALLATION AND OPERATION

FINDING YOUR WAY AROUND YOUR NEW Sin Ba D UNIT



NOTE:
Sin Ba D original design illustrated.
Component locations are in same
relative positions for Sin Ba D II.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 2: INSTALLATION AND OPERATION

2.1 Installation



DANGER

All electrically operated appliances must be electrically grounded in accordance with local codes, or in the absence of local codes, with the NATIONAL ELECTRICAL CODE. If this appliance is equipped with a three-prong 120-volt grounding plug for your protection against electrical shock hazard, it must be plugged directly into a properly grounded three-prong receptacle. **DO NOT CUT OFF OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.**

Installation of your Sin B a D unit consists of locating the unit adjacent to an AC outlet of appropriate voltage (120VAC for domestic U.S. installations), locking the casters, removing the load cell shipping protector, and plugging the unit in. Locate the unit in an area where it will not be bumped or jarred during normal activities. Movement of the unit during operation may cause inaccurate filling of the dispensing chute. **NOTE: The load cell shipping protector consists of a bolt, red wingnut, shim, and large red tag. The bolt and shim MUST be removed for proper operation.**

2.2 Self-Zeroing

The Sin B a D unit is self-zeroing. Each time the unit is placed in the RUN mode, it performs a self-zeroing routine. The routine is characterized by the Dispensing Chute door opening for about 20 seconds and the sequential flashing of the batch weight selector lights. The door will close and the lights will stop flashing when the self-zeroing routine is complete.

2.3 Operation



CAUTION

Ensure the ON/OFF Rocker Switch is in the OFF position before installing the hopper.

1. Verify that the ON/OFF Rocker Switch is in the “OFF” position.
2. Verify that the crumb pan is properly inserted in the deck cutout.
3. Verify that the basket locator rack is properly positioned with the wide end facing you.
4. Verify that the dispensing chute is properly positioned on the load cell arms, with the door hinge screws to the right as you face the unit. Failure to properly position the chute will result in erratic batch weights.
5. Verify that the drum and deflector are properly positioned inside the hopper. Failure to do so will result in a malfunction of your unit. If the deflector is deformed (i.e., bent or distorted), a malfunction of your unit is likely.



DANGER

A pinch-point exists between the drum and hopper when the drum is turning. When removing or installing the deflector or dispensing chute, place the ON/OFF Rocker Switch in the “OFF” position.

6. Verify that the hopper is properly positioned in its cradle. Make sure that the hopper is seated behind the locking shoulder on the cradle. Failure to do so will result in malfunctioning of your unit.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 2: INSTALLATION AND OPERATION

7. Verify that the sight glass is installed. If it is not installed, fries will fall out of the hopper during operation.
8. Place the ON/OFF Rocker Switch in the ON position. The switch will illuminate, indicating that electrical power is being supplied to the unit.
9. Press the RUN Switch  once to place the unit in the RUN mode. The indicator light in the switch will illuminate. The dispensing chute door will open as the unit begins self-calibration and the lights in the batch weight selectors will sequentially flash. The door will close about 20 seconds later and the lights will stop flashing when calibration is completed. Only the RUN mode indicator will be illuminated.
10. Open the hopper lid and load up to 42 lbs/19 kg of French fries into the hopper. Close the hopper lid.
11. Select the desired batch weight by pressing one of the BATCH WEIGHT Selectors. **NOTE: The factory-programmed batch weights for units manufactured for Burger King® are different from standard production models. If in doubt as to which model you have, refer to the model number on the rating plate at the rear of the unit. Units manufactured for Burger King® have model numbers beginning with BK.**

SBD/SBDJ: 1 = 0.50 lb/.23 kg	BKSBD/BKSBDJ: 1 = 1.50 lb/.68 kg
2 = 1.00 lb/.45 kg	2 = 1.25 lb/.57 kg
3 = 1.50 lb/.68 kg	3 = 1.00 lb/.45 kg
4 = 2.00 lb/.91 kg	4 = 0.75 lb/.34 kg

The indicator light in the selector will illuminate and the drum will begin to rotate, transferring fries from the hopper to the dispensing chute. When the prescribed weight has been transferred, drum rotation will cease.

12. Insert an empty basket all the way to the rear of the dispensing chamber. The dispensing chute door will open, dropping the fries into the basket. When the chute is empty, the door will close and the unit will begin to transfer another batch of fries into the chute.



CAUTION

The dispensing of fries into a basket is initiated by an inductive proximity switch located in the dispensing well. The proximity switch activates only when it senses a metallic mass greater than a certain size (e.g., an inserted basket). Thus, it will not be activated by the operator's hand, a cleaning cloth, or any other non-metallic object. However, a ring, watch or some other type of metal could initiate a dispense cycle if inserted into the switch detection area.

NOTE: Built-in logic recognizes the removal and replacement of the basket. Once a dispense cycle has been completed, another basket may be inserted into the dispense well. As soon as the fries in the chute reach the specified weight, the unit will immediately dispense them into the waiting basket. The unit will NOT initiate another dispense cycle if the full basket is not removed and replaced, nor will it initiate another dispense cycle if there is no basket in the dispense well.

To change the batch weight, press another of the numbered selectors before the chute is emptied. If the weight is increased, fries will be dispensed until the new weight is attained. If the batch weight is reduced, the change will take effect with the next cycle after the dispensing chute is emptied.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 2: INSTALLATION AND OPERATION

If the dispensing chute does not fill within 30 seconds, the CHECK HOPPER indicator  in the middle of the control panel will begin to blink and drum rotation will stop. Check the hopper to see if it is empty. If it is empty, reload the hopper then press the PROGRAM  Switch once to place the unit back into operation. If the hopper appears to contain plenty of fries, the fries have probably “bridged” (i.e., stuck together to form an arch over the drum). Redistribute the fries then press the PROGRAM  Switch once to place the unit back into operation.

2.4 Programming the Batch Weight Selectors

The four Batch Weight Selectors in your Sin B a D are factory programmed with four standard batch weights (see page 2-3). If desired, they can be reprogrammed to dispense batch weights ranging from a minimum of ½ lb/.23 kg up to a maximum of 2¼ lbs/1 kg.



CAUTION

Programming the unit for weights less than a ½ lb/.23 kg will result in erratic batch weights.

The PROGRAMMING mode can only be entered when the unit is in STANDBY mode. To enter the STANDBY mode, press the RUN Switch  once. Verify that the indicator light in the Switch is out. If not, press the RUN Switch again.

1. Remove the hopper assembly from the unit. **NOTE:** If the hopper is not empty, refer to Section 3.1 for instructions on emptying the hopper.
2. Press the PROGRAM Switch  once to enter the PROGRAMMING mode. The indicator light in the switch will blink. Press BATCH WEIGHT Selector 1 four times. The indicator lights in each of the selectors will light in sequence until all four are lit, at which time the indicator in the PROGRAM Switch will stop blinking and the indicator in the CLEAN Switch will blink.

NOTE: *If you do not begin pressing Selector 1 within 3 seconds after entering the PROGRAMMING mode, the unit will automatically return to the STANDBY mode. If you press a BATCH WEIGHT selector other than 1, the unit will return to the STANDBY mode immediately after the selector is pressed.*

3. Press the CLEAN Switch  once. The dispensing chute door will open and the lights above the numbered selectors will blink, indicating that the system is “zeroing” itself and performing its self-calibration routine. This process takes about 20 seconds. When the process is complete, the dispensing chute door will close and the indicator lights will go out.
4. Carefully place an object weighing ¼-pound less than the desired batch weight on the dispensing chute door and wait at least 5 seconds for the load cell to stabilize. For example, to program a batch weight of 1 lb/.45kg, use an object weighing ¾ lb/.34kg.
5. Press one of the numbered switches to program the weight associated with that switch. The switch’s indicator will light momentarily then go out, showing that the weight for that switch has been successfully recorded.
6. Repeat steps 3 and 4 for each of the remaining numbered switches.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 2: INSTALLATION AND OPERATION

7. Press the PROGRAM Switch  once to exit the PROGRAMMING mode.
8. Press the RUN Switch  once to return to the RUN mode. The light in the switch will illuminate and the dispensing chute door will open and remain open for about 20 seconds as the unit re-zeros itself. Additionally, the lights in the batch weight selectors will sequentially flash during the self-zeroing routine. When the door closes, replace and reload the hopper to return the unit to operation.

2.5 Manual Operation

If the unit fails to zero, the unit can be manually operated until a servicer arrives to make repairs. Follow the procedure below.

1. Turn the computer off (press the RUN Switch ).
2. Place a basket under the hopper dispense door.
3. Press the CLEAN Switch  once to dispense fries into the basket. NOTE: If the dispense door fails to open, pull down on the door arm to manually open the door.
4. When the basket is filled to the desired level, press the CLEAN Switch  once to stop dispensing fries.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

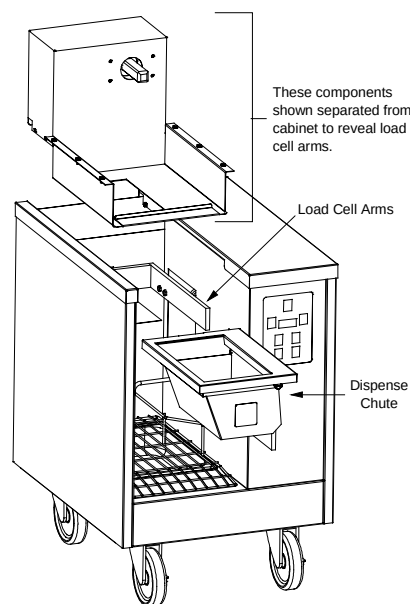
CHAPTER 3: MAINTENANCE & OPERATOR TROUBLESHOOTING

3.1 Cleaning and Maintenance

Routine cleaning in accordance with the following steps is the only operator maintenance required for your Sin Ba D unit.

1. Put the unit in STANDBY mode. Place a container beneath the dispensing chute and press the CLEAN  Switch. The indicator in the switch will light. The dispensing chute door will open and the drum will rotate, transferring fries from the hopper to the container. Press the CLEAN Switch again to stop transferring. To transfer more fries, press the CLEAN Switch again. When the hopper is empty, press the RUN Switch  once to return to the STANDBY mode. The dispensing chute door will remain open.
2. Place the ON/OFF Rocker Switch in the OFF position.
3. Remove the hopper lid and the metal deflector. Lift up on the hopper while carefully pulling it toward you. This will disengage the hopper from its retainer, allowing it to slide forward for removal.

Remove the dispensing chute by lifting it up from the load cell arms and carefully sliding it out toward you.



WARNING

NEVER REMOVE THE ALUMINUM LOAD CELL ARMS FROM YOUR UNIT! DOING SO CAN CAUSE SERIOUS DAMAGE TO YOUR UNIT.

4. Clean all components in accordance with the prescribed sanitary procedures of your organization. Completely dry all components before reassembling the unit by reversing the disassembly process.



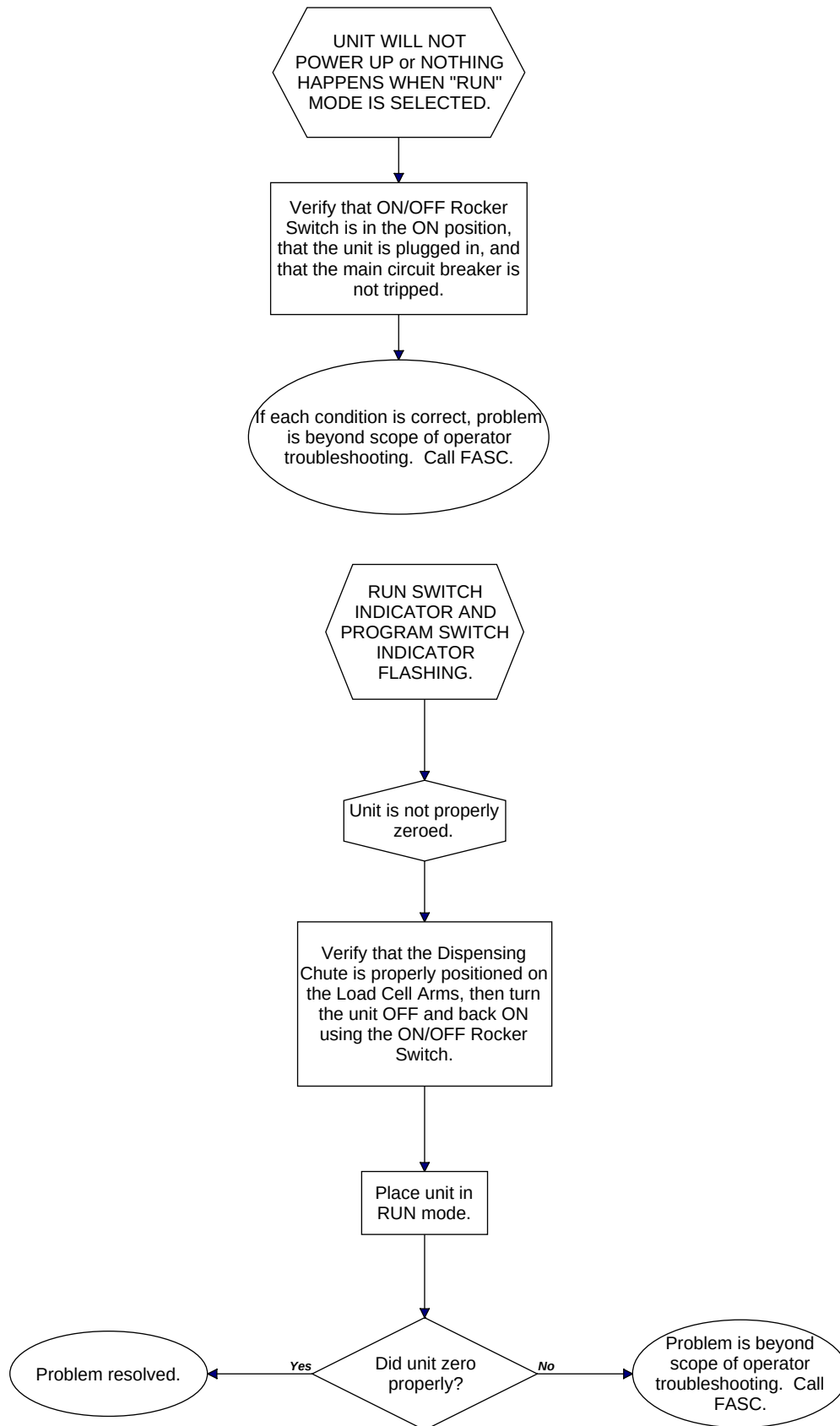
CAUTION

When replacing the dispensing chute, ensure that the door hinge screws are to the right as you face the unit.

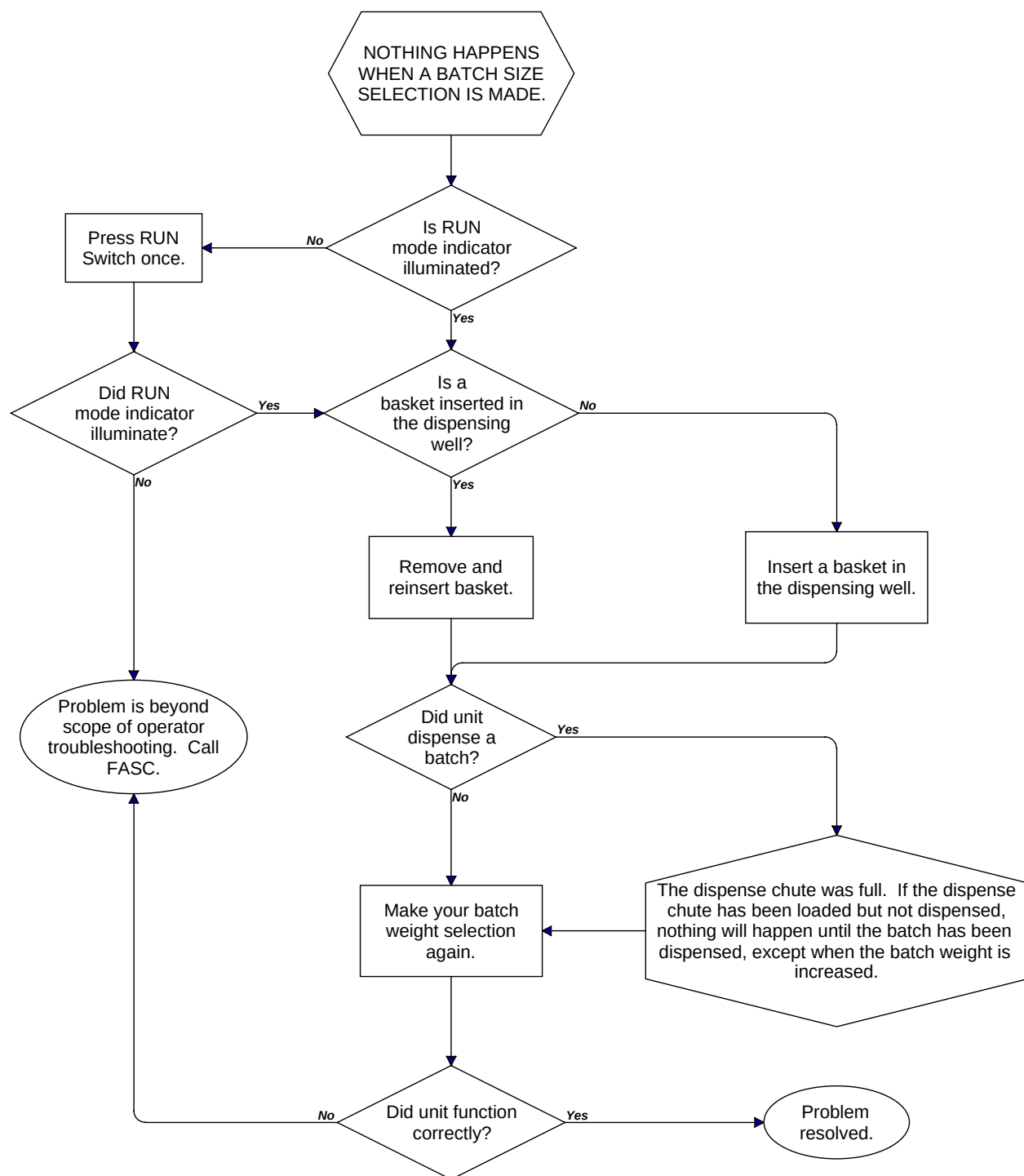
3.2 Operator Troubleshooting

The operator troubleshooting guides found on the following pages are intended to help operators resolve routine problems that may be encountered during operation of the unit.

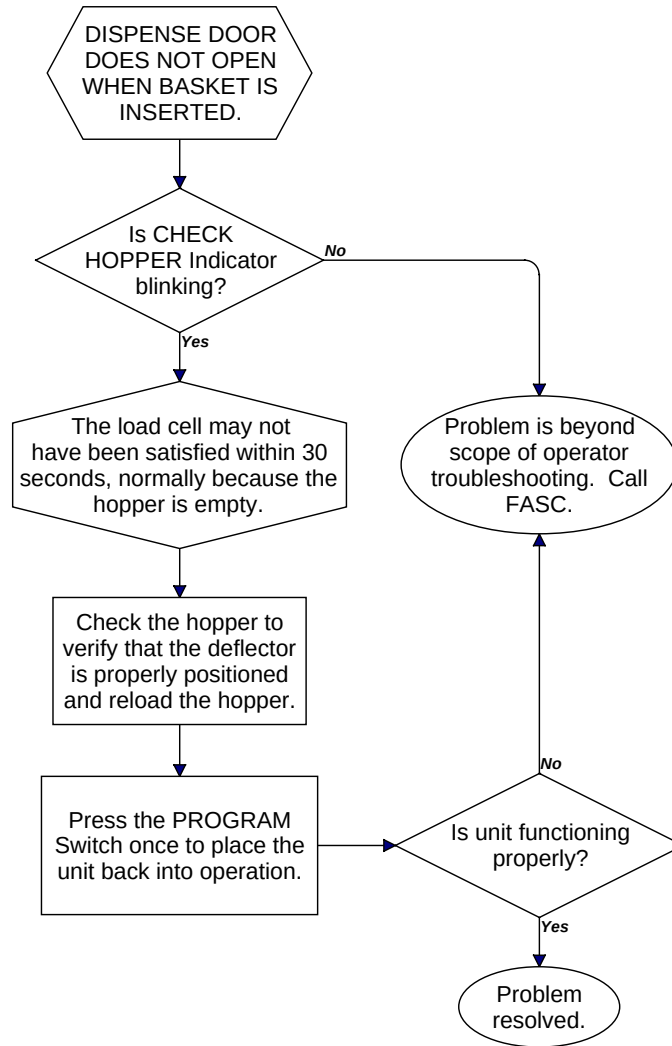
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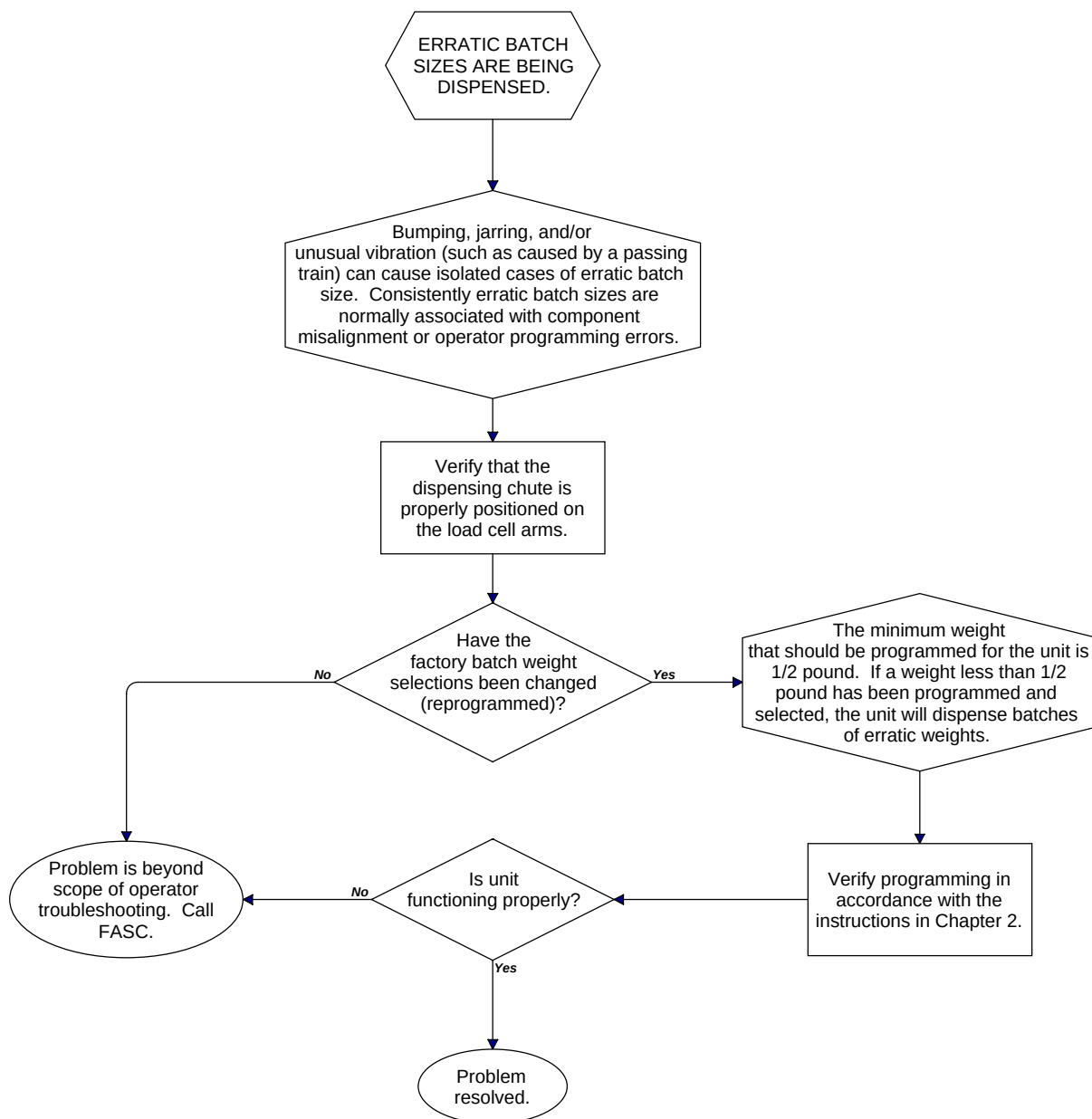
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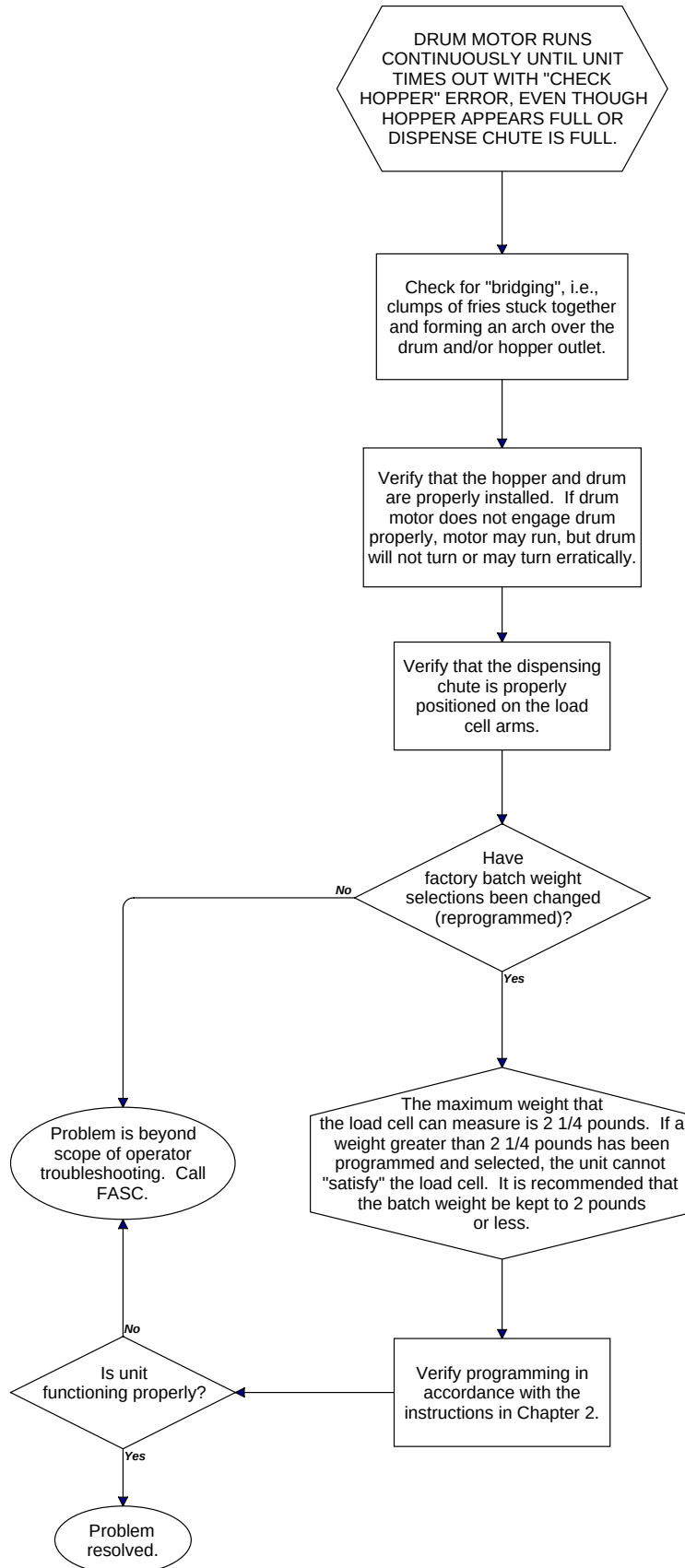
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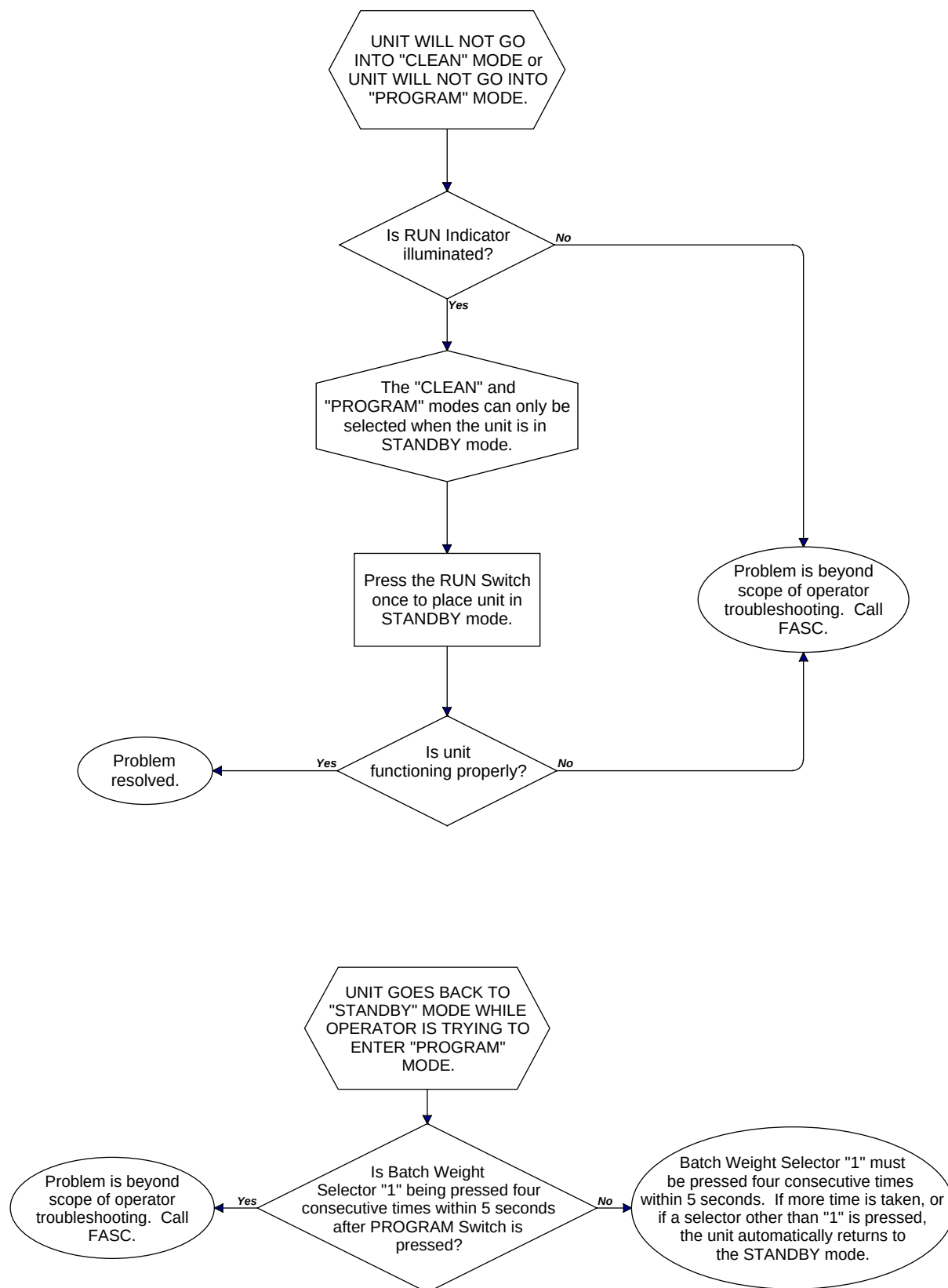
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CHAPTER 4: TECHNICIAN TROUBLESHOOTING

4.1 Functional Description

When the unit is plugged into an electrical outlet, line voltage is supplied to the transformer. Placing the ON/OFF switch in the ON position supplies 24VAC to the motor interface board. The motor interface board supplies 12VDC to the controller and 24VDC to the dispense motor and drum motor. The drum motor will activate briefly as the computer in the controller “wakes up,” then motor logic circuits in the controller will turn it back off. If closed, the dispensing chute door will open and remain open.

When the ON/OFF switch is placed in the ON position, the controller automatically enters the STANDBY mode. When in the STANDBY mode, the batch weight selector switch circuits are disabled and the CLEAN and PROGRAM circuits are enabled. No indicator LEDs are illuminated when the unit is in the STANDBY mode.

Pressing the RUN switch places the controller in the RUN mode and causes the RUN mode indicator above the switch to illuminate. Every time the unit is placed in the RUN mode, the controller will perform an initialization process to “zero” the load cell. The dispensing chute door will open and remain open throughout the process to ensure accuracy. When in the RUN mode, the batch weight selector switch circuits are enabled and the CLEAN and PROGRAM circuits are disabled.

The load cell is an aluminum bar that acts as a bridge resistor. One end of the load cell is fixed. The load cell arms, dispensing chute, and dispense motor are attached to the opposite end. Their weight causes a slight distortion of the bar, which changes the bar’s resistance.

During the zeroing process, circuitry in the controller measures the resistance associated with the weight of the empty dispensing chute, the dispense motor, and the load cell arms. It compares this to a factory-programmed resistance range and, if within the range, records this as the “zero” value. If the resistance is outside of tolerance, the unit goes into a zero failure mode, signified by blinking of the RUN mode indicator and the PROGRAM mode indicator.

During programming of the batch selector switches, the controller measures the difference between the previously determined “zero” resistance and the resistance associated with the new weight. It records the differential so that a batch weight always corresponds to the “zero” resistance plus the differential resistance, not a specific resistance value. This avoids erratic batches caused by fluctuations in the “zero” weight.

When a batch weight selector is pressed, the controller activates the drum motor to transfer French fries to the dispensing chute. When the fries enter the chute, their weight further distorts the load cell, causing a change in resistance. When the resistance is equal to the “zero” resistance plus the resistance differential associated with the batch weight selector pressed, the controller signals the drum motor to stop.

A proximity sensor at the rear of the dispensing well senses when a basket has been inserted into the well. It signals the controller, which in turn activates the dispense motor to dump the fries. When the door reaches the full open position, a flag on the dispense motor shaft is detected by a Hall Effect sensor that signals the controller. The controller in turn reverses the current to the motor, closing the door. When the door reaches the closed position, another Hall Effect sensor detects the flag on the motor shaft and signals the controller. The controller reduces power to the dispense motor to approximately 1VDC, causing the motor to hold the door closed. A built-in 1½-second delay allows the load cell to stabilize before the controller reactivates the drum motor to reload the dispensing chute. If a basket has been pre-positioned beneath the dispensing chute, the unit will dispense the batch as soon as the load cell is satisfied and begin loading another batch. The

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 4: TECHNICIAN TROUBLESHOOTING

second batch will be held until the first batch is removed and a new basket is inserted. The process continues until the unit is placed in the STANDBY mode or the ON/OFF switch is placed in the OFF position.

4.2 Troubleshooting and Problem Isolation

This section is intended to provide technicians with a general knowledge of the broad problem categories associated with this equipment, and the probable causes of each. The information in this section pertains to both the original-design **Sin B a D** and to the **Sin B a D II**.

Problems you are likely to encounter can be grouped into three broad categories:

- a. Failures to “zero”
- b. Erratic or inaccurate batch weights
- c. Failures to function

A series of troubleshooting guides is also included at the end of the chapter to assist in identifying some of the more common problems.

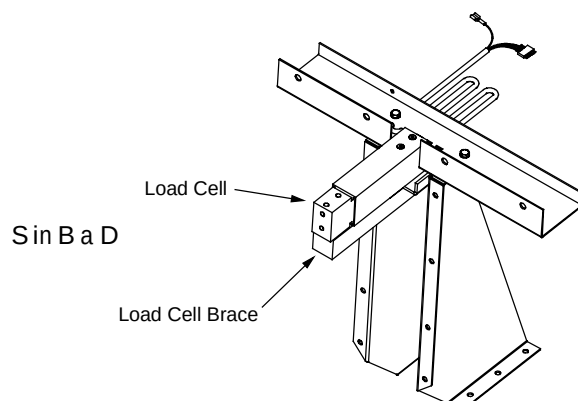
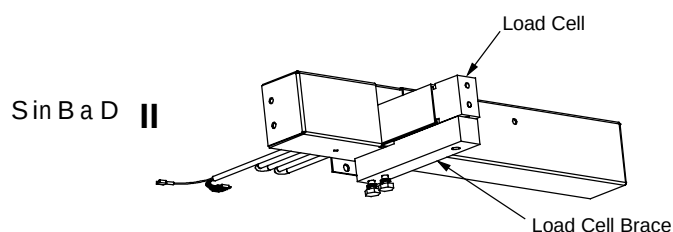
4.2.1 Failures to “Zero”

As discussed in Section 4.1, the unit determines batch weights by comparing the load cell resistance to a pre-recorded resistance value equal to the empty or “zero” resistance value plus a resistance differential value corresponding to a particular batch weight. When the load cell resistance is equal to the “zero” resistance plus the resistance differential, the load cell is “satisfied” and the drum motor is stopped. Although each load cell is theoretically identical, in actuality any given cell may have a slightly different resistance from any other cell. Consequently, the cell must be “zeroed” to determine and record its actual resistance in order to ensure accurate batch weights. The unit must be “zeroed” with the dispense chute in place, and no part of the dispense chute may be in contact with the cabinet.

The load cell itself is basically an aluminum bar. When not under stress, it has a particular resistance. When the bar is vertically distorted by applying weight to one end, the resistance changes. Also, if the bar contacts any other component, such as the end of the dispense motor shaft, its resistance will be changed, forcing it outside the acceptable range. Circuitry within the controller measures the load cell resistance and compares this to a factory-programmed (and very narrow) range. As long as the load cell resistance falls within this range, the unit will “zero.”

Other than the load cell or an associated component being in contact with something it shouldn't, there are only two probable causes for failing to “zero.” The first is a failed load cell. Failure may be caused by bending of the cell or by damage to the cabling. Because the resistance

Load Cell Assemblies



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range is narrow, it is usually impossible to see the damage, so the appearance of the load cell is not a good indicator of load cell failure, although an obviously damaged cell is immediately suspect. If the load cell is good, the only other cause is a malfunctioning controller. If the controller cannot measure load cell resistance or loses the programmed resistance range, it cannot “zero.” In either situation, the only solution is to replace the failed component, but before doing that verify that

- a. The load cell brace is not touching the end of the dispense motor shaft. (Do this by trying to insert a piece of paper between the two. If it can be inserted without drag, it’s okay.)
- b. No part of the dispense chute is touching the cabinet.

The recommended method of isolating the failed component is by substitution, starting with the controller. It is not necessary to install a controller to test it. Simply plug the cabling into the new controller. If the unit “zeroes,” the controller in the unit has failed and should be replaced with the new one; if not, it is most likely the load cell that has failed.

If the unit “zeroes” sometimes but fails at others, check for a loose connection at the controller.

4.2.2 Erratic or Inaccurate Batch Weights

The probable causes of erratic or inaccurate batch weights are bumping or jarring of the unit while the drum motor is running and improper programming of the batch weight selectors.

The unit should be positioned in an area where it is not likely to be bumped or jarred during operation. If erratic or inaccurate batch weights occur at random intervals, it is likely that the unit is being bumped or jarred by workers. The only solutions in this case are to move the unit or better educate employees about the effects of bumping the unit during operation.

If the erratic or inaccurate batch weights occur at specific times, or if the problem comes and goes, it may be that there is a source of unusual vibration. Two things to consider are facility location (e.g., is it close to a railroad track or a highway where trains or heavy trucks pass on a regular schedule) and unit location (e.g., is it next to a heavy door that slams shut), etc. In the case of facility location not much can be done, although it may be possible to dampen the vibrations by placing the unit on a thick pad. In the case of unit location, consider moving the unit.

If erratic or inaccurate batch weights occur consistently, it is likely that one or more of the batch weight selectors have been improperly programmed. Verify that the selectors have been properly programmed in accordance with the instructions in Chapter 3.

4.2.3 Failures to Function and Improper Functioning

The probable causes of this category of problem are improper connections and failed components. If you have not already done so, you should read Section 4.1 (the system theory of operation) before continuing with this section.

The paragraphs that follow identify the general types of failures that may be encountered and the possible causes of each. Troubleshooting Guides at the end of the chapter provide step-by-step problem-isolation procedures.

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Failure of the unit to initialize when ON/OFF switch is placed in ON position can be caused by failure of a component in the input power circuit or failure of the controller. When the ON/OFF switch is placed in the ON position the two error conditions that may be encountered are that the drum motor does not activate at all or it runs continuously.

Normally when the ON/OFF switch is placed in the ON position, the drum motor briefly activates (approximately 2 seconds) then stops. If the drum motor runs continuously as soon as the ON/OFF switch is placed in the ON position, there are three probable causes. The first is that 12VDC is not getting to the controller from the motor interface board. The second is that the controller has failed. The third is that controller signals are not reaching the motor drive circuits.

If the drum motor does not activate at all, the probable causes are failure of a component in the input power circuit.

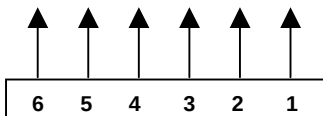
Failures of the dispense chute door to open or close are caused by problems with the Hall Effect sensors, the proximity sensor, the dispense motor, the motor interface board, or the controller. The primary indication of a problem involving the “closed” Hall Effect sensor (J2 on the controller) is the partial closing of the door following the “zero” routine or the removal and replacement of a basket during normal operation.

A failed “open” Hall Effect sensor (J3 on the controller) is indicated by the normal “zeroing” of the unit and loading of the dispense chute, but failure of the door to open to dispense the fries. A failed proximity sensor will give the same indication, so care must be taken to differentiate between the two.

If the Hall Effect sensors have been ruled out as the cause of the failure to function, the most likely cause is a motor-related problem.

Failures of the drum motor to start or stop are caused by problems in the controller, load cell, motor interface board, or drum motor and the associated wiring. If the motor fails to stop, the problem is not with the motor. It may be with the controller, the load cell, or the motor interface board.

Data cable analysis allows the technician to troubleshoot problems involving controller signals to the drum and dispense motors. The data cable plugs into jack J7 on the controller. The outer two wires in the cable are grounds; the remaining 4 transmit signal voltages from the controller to the drum motor and dispense motor. Looking down at the connector from the front of the unit, the pins are numbered 1 through 6 as illustrated below.



The controller sends “on/off” signals to electronic switches located on the motor interface board for starting and stopping the drum motor, and for controlling the direction of rotation of the dispense motor. The table below indicates the expected multimeter readings in DC volts for the conditions listed. The voltages are relative to Pins 1 or 6, which are grounds.

Condition	Pin 5	Pin 4	Pin 3	Pin 2
Drum Motor On				+5
Drum Motor Off				0
Door Open	+5	+5	+5	
Door Closed	0	+5	+5	

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4.3 Troubleshooting Guides

The Troubleshooting Guides on this and the following pages provide a systematic method for isolating specific problems and the action(s) to take to correct them. Also, don't forget the Operator Troubleshooting Guides found in Chapter 3. Most problems likely to be encountered are covered in these two sets.

Don't hesitate to call the ***Frymaster*** Technical Services Department at 1-800-551-8633 if you need assistance in solving a particular problem.

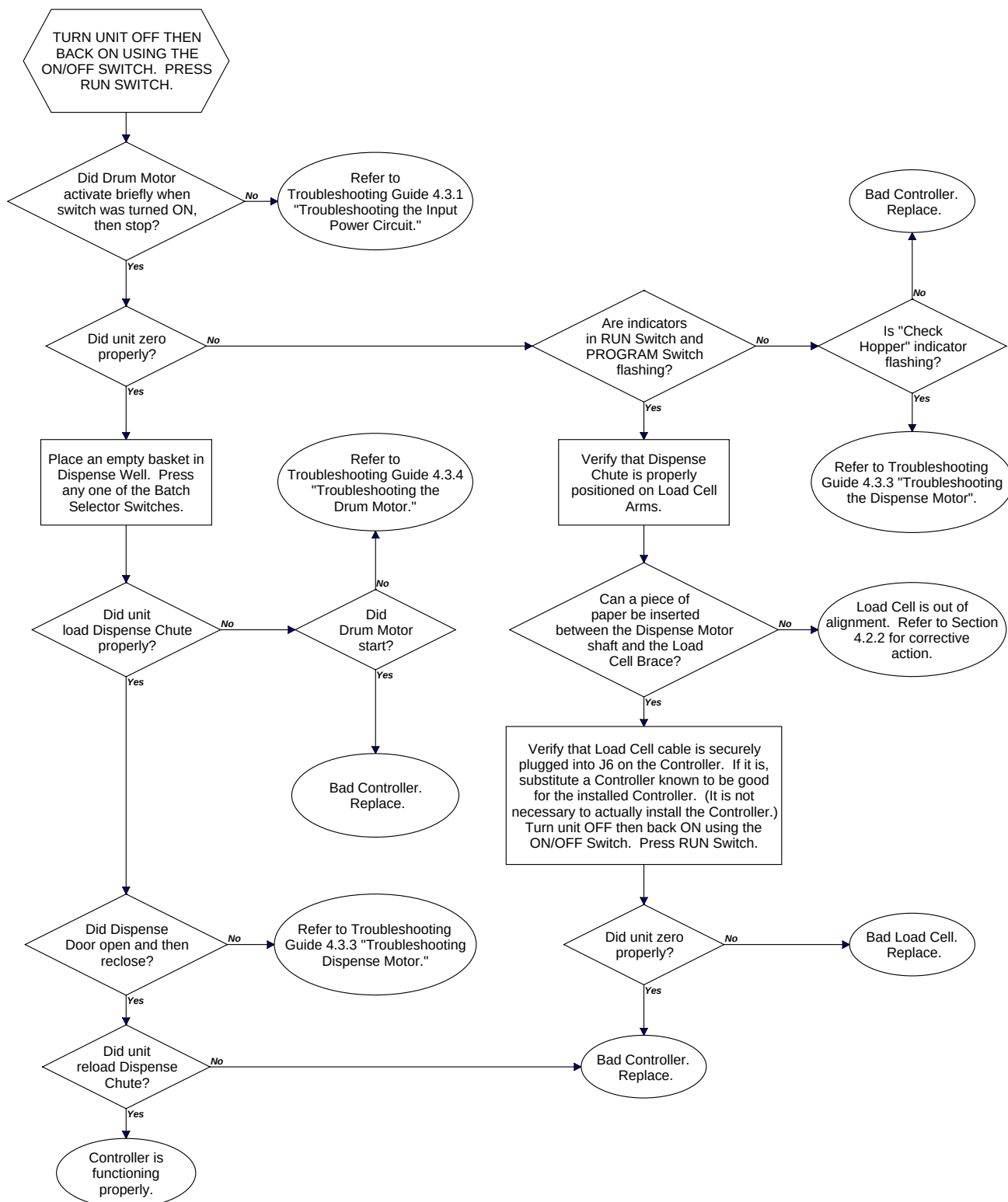
4.3.1 Troubleshooting the Input Power Circuit



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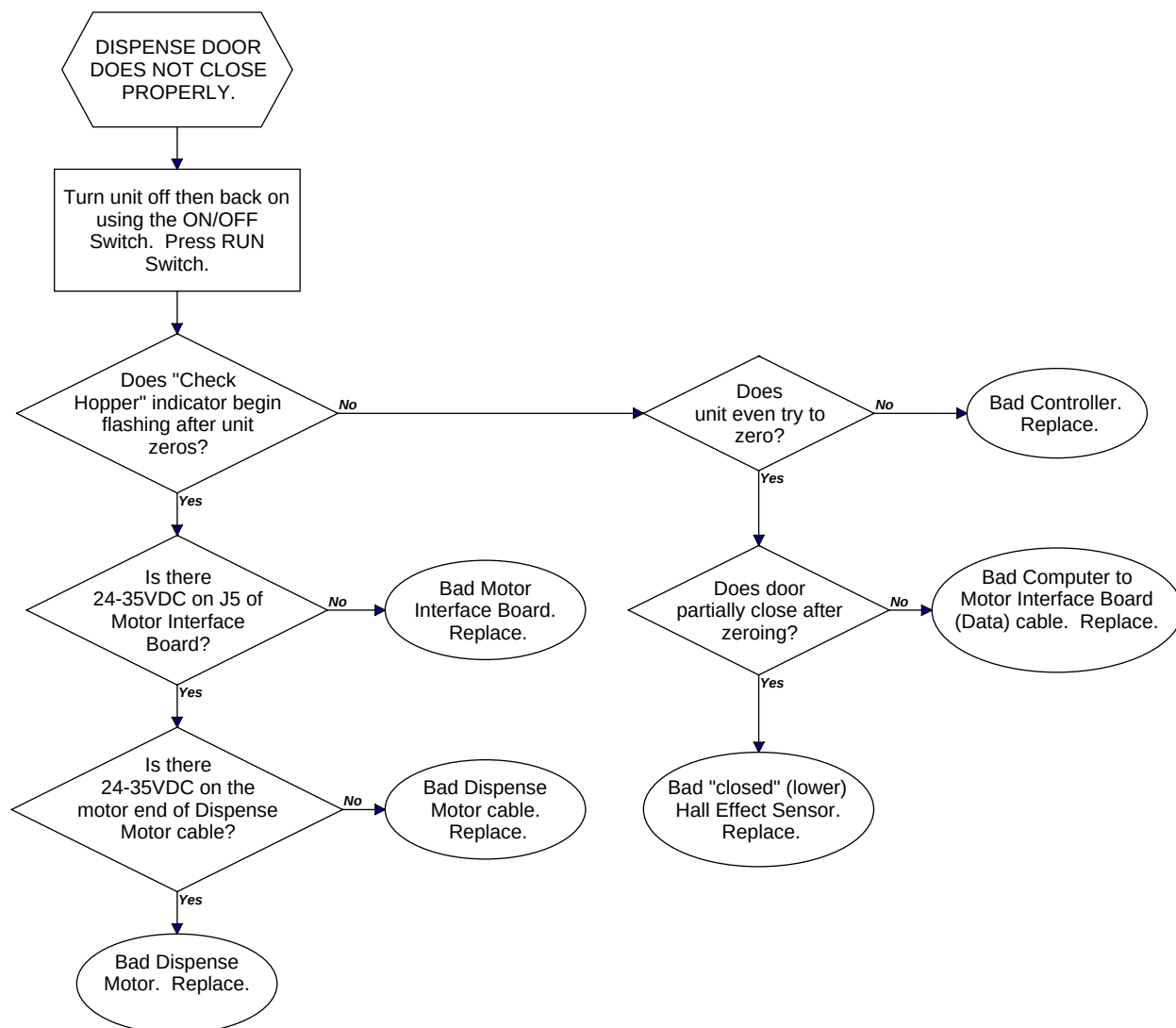
CHAPTER 4: TECHNICIAN TROUBLESHOOTING

4.3.2 Troubleshooting the Controller



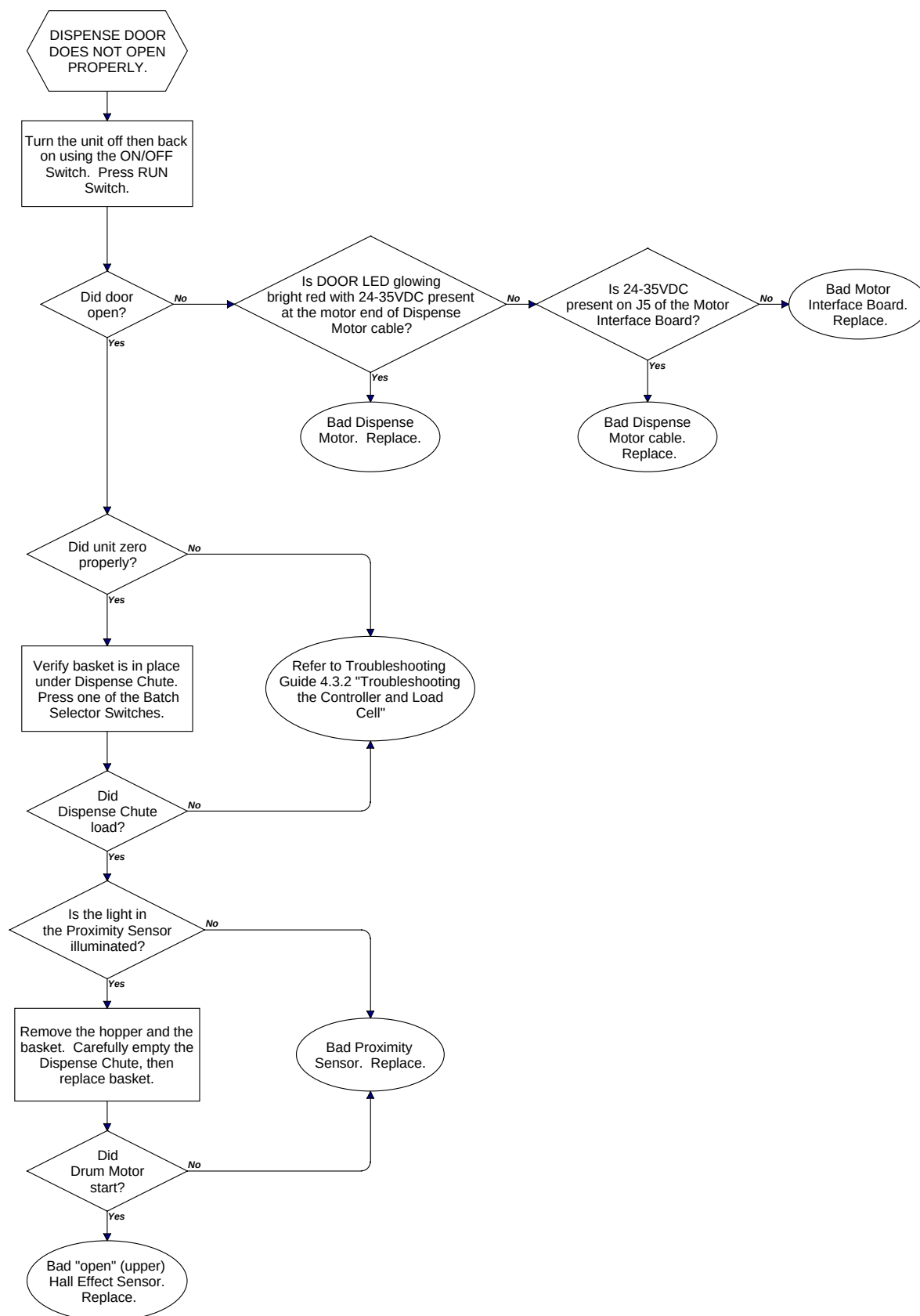
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4.3.3 Troubleshooting the Dispense Motor



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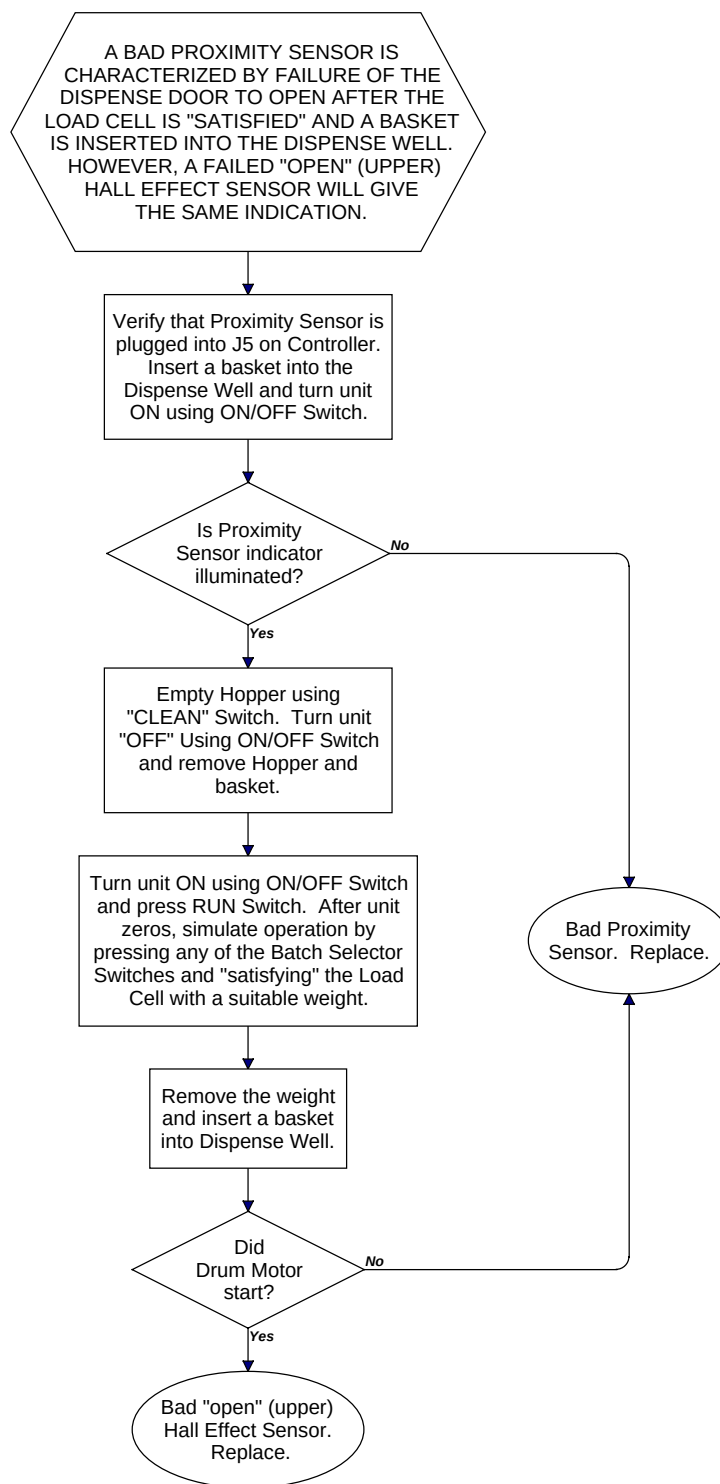
CHAPTER 4: TECHNICIAN TROUBLESHOOTING



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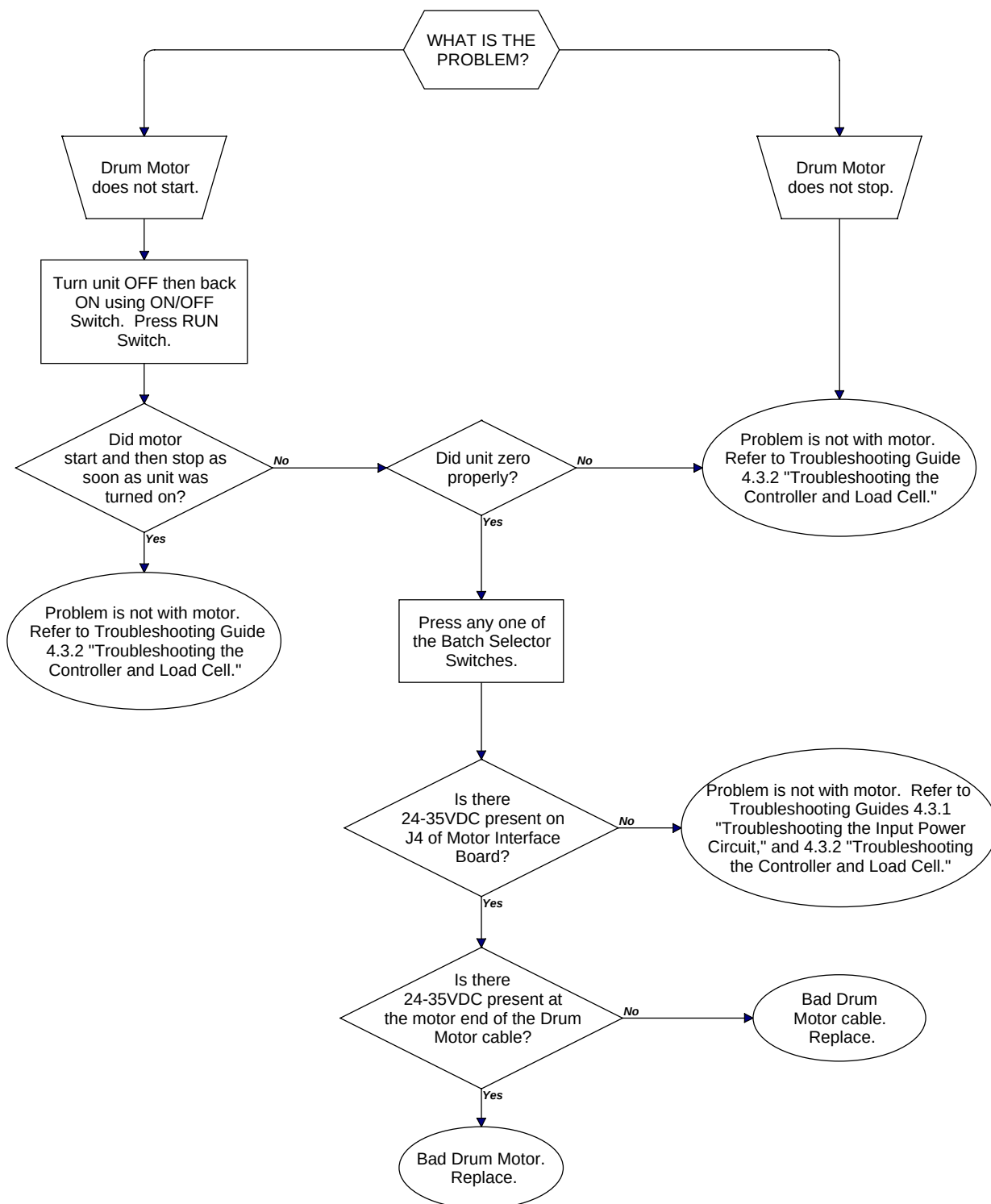
CHAPTER 4: TECHNICIAN TROUBLESHOOTING

4.3.4 Troubleshooting the Proximity Sensor

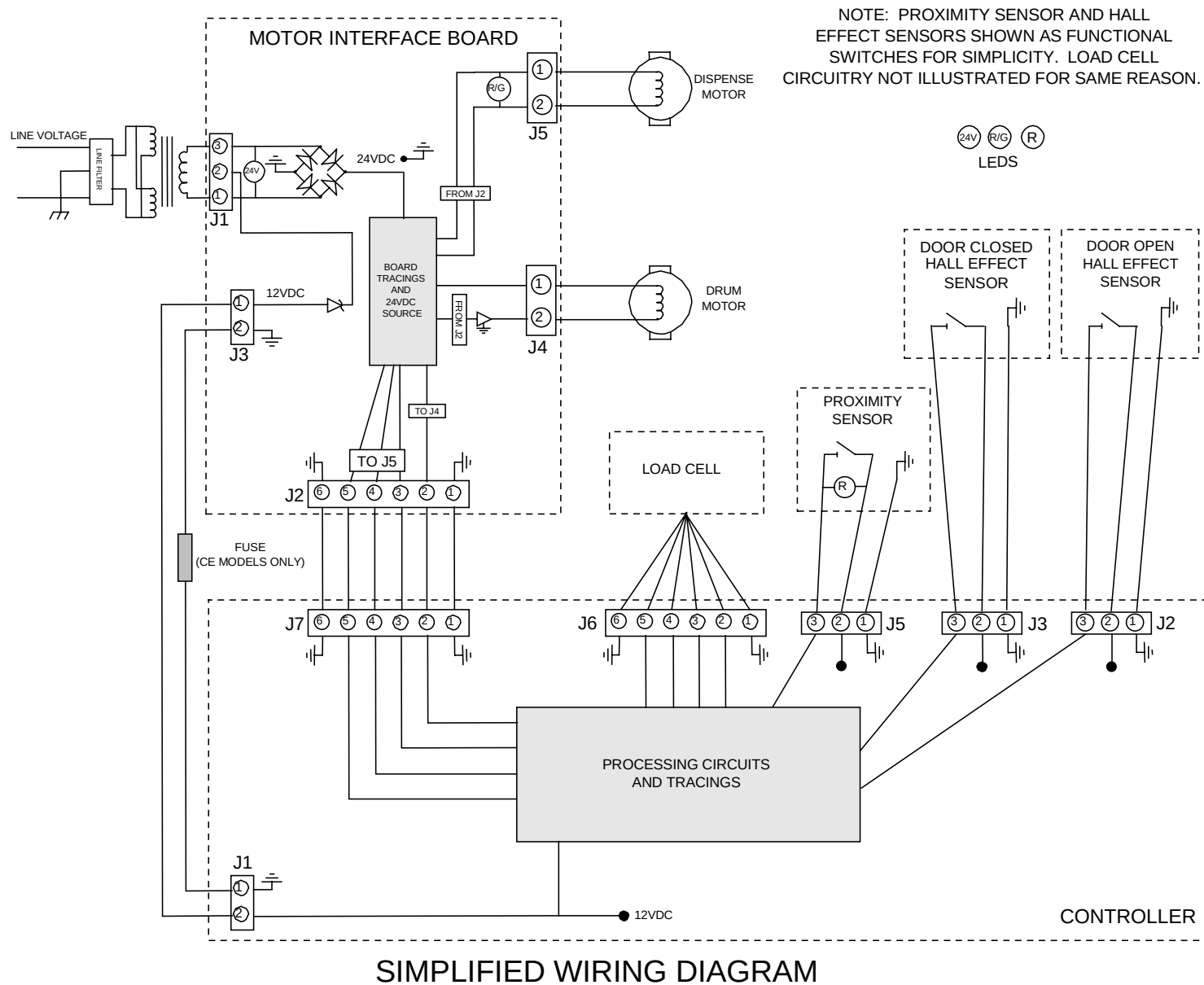


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4.3.5 Troubleshooting the Drum Motor



4.4 Wiring Diagrams



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805-1020A

PRIMARY TRANSFORMER		OPTIONAL TRANSFORMER	
V & F TRANSFORMER CORP. F5P31		BASLER ELECTRIC BE 29815 001	
<p>24VCT@2.0A</p> <p>100VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>115VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>100VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>115VAC 50/60Hz</p>
<p>24VCT@2.0A</p> <p>200/208VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>230/240/250VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>200/208VAC 50/60Hz</p>	<p>24VCT@2.0A</p> <p>230/240/250VAC 50/60Hz</p>

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 5: REPLACING Sin B a D COMPONENTS

5.1 Accessing Components in Original Design Sin B a D Units

The unit's back panel must be removed to access all electronic components except the drum motor. The panel is held in place by three hex-head screws located along the bottom edge. A separate access panel must be removed to gain access to the drum motor. It is held in place with two hex-head screws. In order to access the load cell components, ON/OFF switch, and controller, the right cabinet top must also be removed. It is secured by two pan-head machine screws and Keps nuts at the left rear corner (as viewed from the rear of the unit) and one hex-head screw at the right rear corner. The front of the panel is held in place by a pair of tabs that fit into slots cut into the front of the cabinet. When the retaining screws have been removed, lift up on the rear and move the cabinet top toward the front to disengage the tabs.

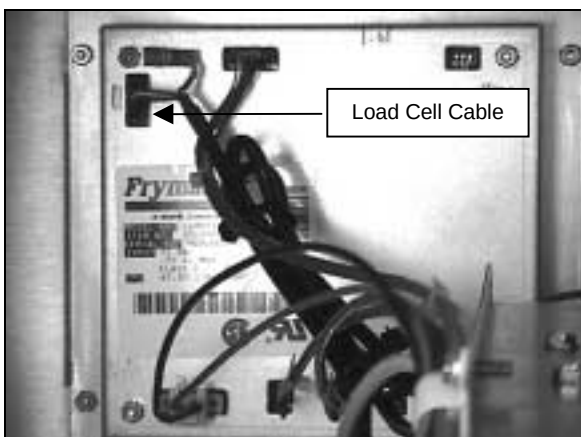
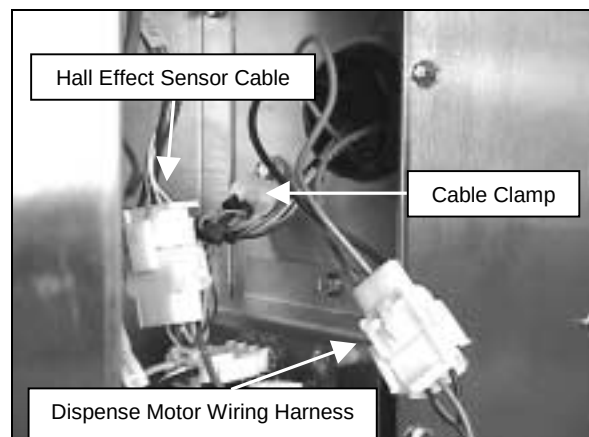
5.2 Replacing Components in Original Design Sin B a D Units

5.2.1 Replacing the Controller

1. Disconnect the unit from the electrical power source.
2. Disconnect the load cell cable, motor control logic cable, 12VDC power cable, Hall Effect sensor cables, and proximity sensor cable from the jacks on the back of the controller. If the cables are not marked indicating their jacks, mark the cables before disconnecting them.
3. The controller is held in place by four Keps nuts. Remove the nuts and pull the controller straight rearward off the mounting studs.
4. Reverse steps 1-3 to install new controller.

5.2.2 Replacing the Load Cell and Associated Components

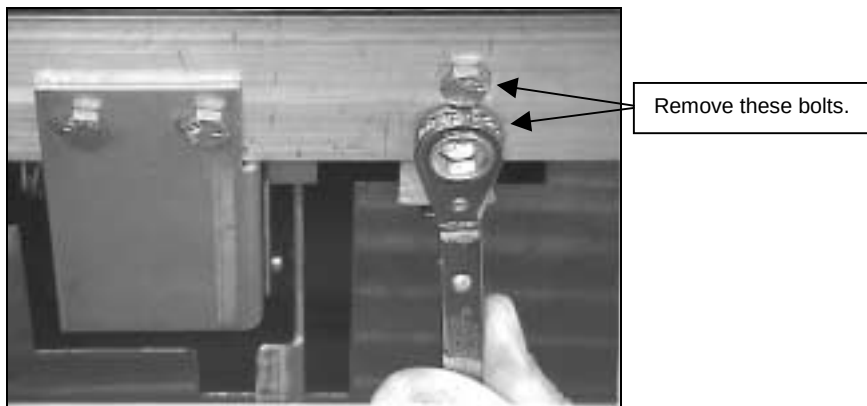
1. Disconnect the unit from the electrical power source.
2. Disconnect the load cell cable from the back of the controller (see left photo below).
3. Remove the cable clamp from the Hall Effect sensor cable then disconnect the dispense motor wiring harness and Hall Effect sensor cable (see right photo below).



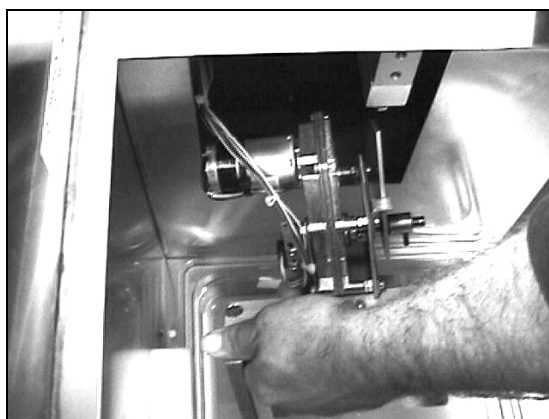
Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 5: REPLACING Sin B a D COMPONENTS

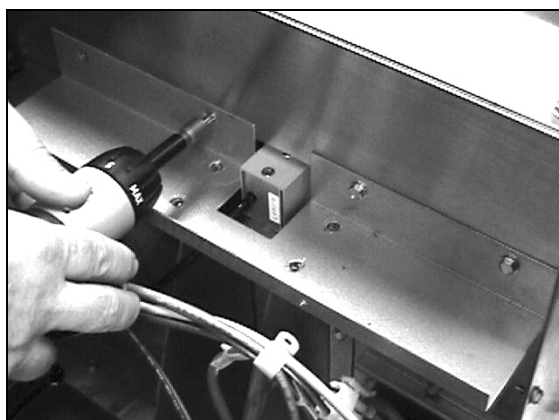
4. Remove the basket alignment rack from the dispensing well. Remove the two bolts securing the load cell arms to the load cell. Do not remove the bolts securing the dispense motor to the load cell arms. Be ready to support the approximate 6-pound/3-kilogram weight of the load cell arms/dispense motor assembly when the bolts are removed.



5. Lower the load cell arms/dispense motor assembly to the bottom of the dispensing well or remove it from the unit completely.



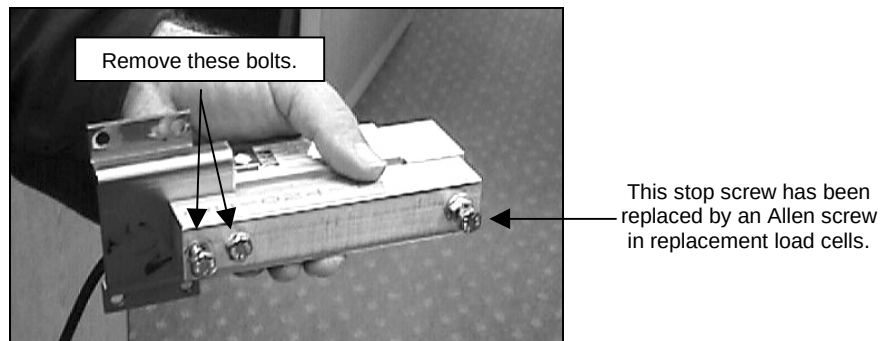
6. Remove the eight hex-head screws securing the load cell stiffener to the cabinet side and gussets. The load cell assembly will then be free.



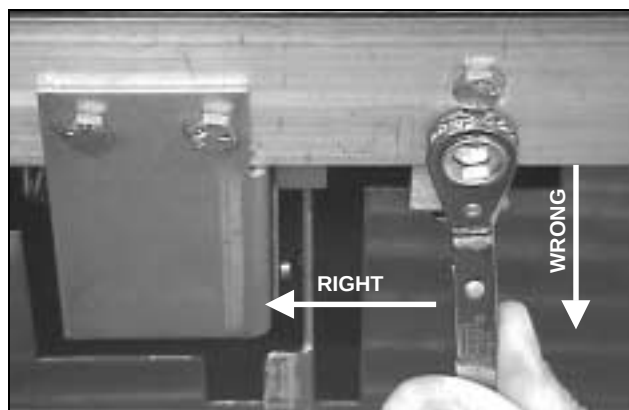
Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 5: REPLACING Sin B a D COMPONENTS

7. Remove the two bolts securing the load cell to the load cell brace. Some early production load cells may have a stop screw on the free end of the load cell brace. The stop screw in replacement load cells has been replaced by an Allen screw.



7. Reassemble the load cell, load cell cradle, and load cell brace but do not tighten the bolts. Hold the assembly with the load cell on the bottom and the cable end toward you. Rotate the load cell brace to the right so that it is approximately $\frac{1}{8}$ -inch/3mm out of alignment with the load cell, then tighten the bolts. This ensures that the brace will not come in contact with the dispense motor shaft, allowing the unit to “zero” properly. Verify that the gap between the load cell and the stop screw in the load cell brace is approximately .015 inch $\pm$.005 inch (.4mm $\pm$.13mm).
9. Reinstall the load cell and stiffener. Do not fully tighten the 4 screws securing the assembly to the gussets at this time.
10. Reattach the load cell arms/dispense motor assembly to the load cell, taking care to get the arms level. When tightening the bolts, position your wrench vertically so that torque is applied from front to rear, not top to bottom to avoid stressing the load cell. Torque to 80 inches/pound.



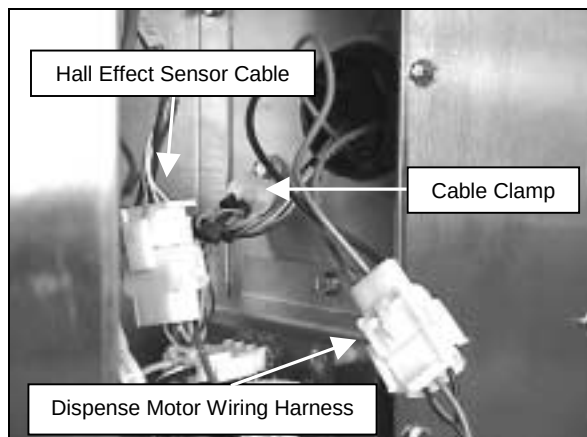
11. Verify that the load cell brace is clear of the dispense motor shaft by inserting a piece of paper between the two components. If there is any drag on the paper, carefully rotate the load cell arms to obtain clearance. After clearance has been verified, fully tighten the four screws securing the load cell to the gussets.
12. Reverse steps 1 through 4 to complete the procedure.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

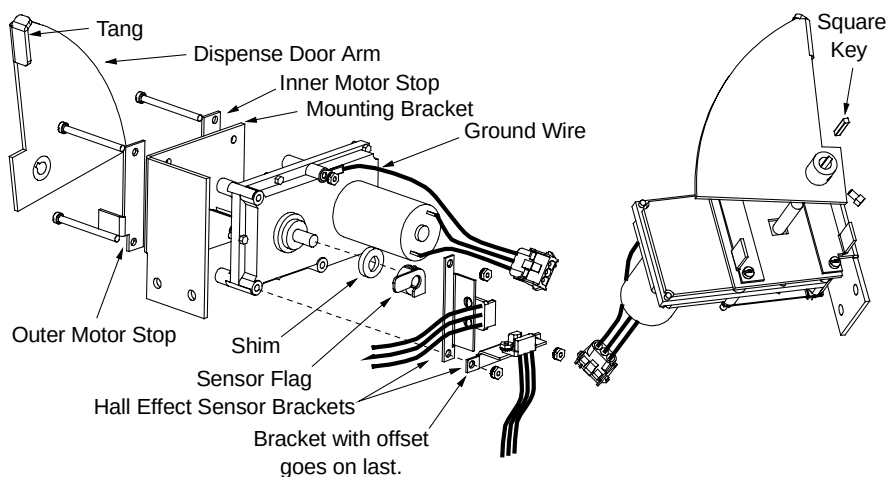
CHAPTER 5: REPLACING Sin B a D COMPONENTS

5.2.3 Replacing the Dispense Motor

1. Disconnect the unit from the electrical power source and remove back panel to access wiring.
2. Disconnect the dispense motor wiring harness and Hall Effect sensor cable and remove the cable clamp on the Hall Effect sensor cable. Remove the two bolts securing the motor assembly to the load cell arms and remove the assembly from the unit.



3. Remove the setscrew securing the dispense door arm to the motor shaft and slip the arm from the shaft, being careful not to lose the square key. Remove the four Keps nuts from the screws securing the motor assembly to the dispense motor bracket.



4. Loosen the setscrew securing the sensor flag to the motor shaft and slide the flag and shim (spacer) from the shaft.
5. Slip the Hall Effect sensor brackets off the mounting screws and separate the motor and mounting bracket.
6. Assemble the replacement motor to the bracket then replace the Hall Effect sensor brackets, installing the bracket with offset last (see illustration in step 3). Replace and tighten the four Keps nuts, torquing to

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

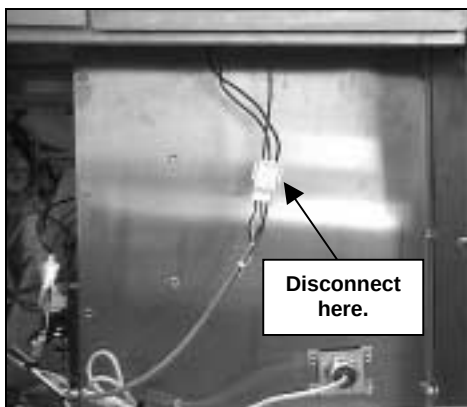
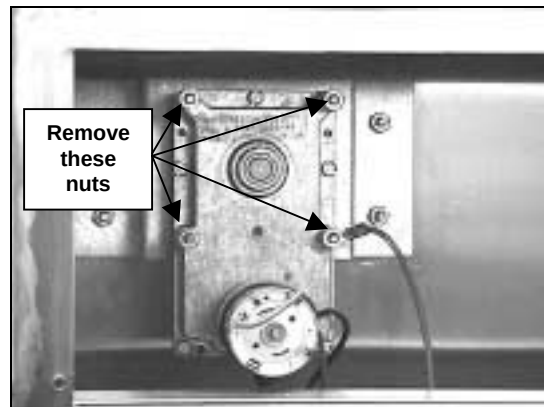
CHAPTER 5: REPLACING Sin B a D COMPONENTS

5-10 inches/pound. **NOTE:** Ensure the ground wire is reattached to the upper right hand mounting screw.

7. Insert the square key into the groove in the long motor shaft, align the slot in the dispense arm hub with the square key, and slip the arm onto the shaft with the hub on the outside (see illustration in step 3).
NOTE: The door must be positioned between the motor stops (rotate the shaft, if necessary) and there must be at least $\frac{5}{16}$ " (8mm) clearance between the door and the motor. Torque the setscrew to 20-25 inches/pound.
8. Slip the shim (spacer) onto the short motor shaft, followed by the sensor flag (with the hub facing the shim). Rotate the dispense arm so that the tang is pointed up (see illustration in step 3) and the edge is resting on the inner motor stop.
9. Remove any slack in the motor shaft by placing the arm end on a work surface and gently pressing down on the motor. At the same time, rotate the sensor flag so that it is positioned between the faces of the upper (left) Hall Effect sensor. Verify that the arm is resting on the inner motor stop, then tighten the setscrew, torquing to 12 inches/pound.
10. Reinstall motor assembly by reversing steps 1 and 2.

5.2.4 Replacing the Drum Motor

1. Disconnect the unit from the electrical power source.
2. Disconnect the drum motor wiring from the drum motor cable (see left photo below). **NOTE:** The drum motor cable plugs into the motor interface board and the motor wiring plugs into it. It is not necessary to remove the drum motor cable.



3. Remove the four Keps nuts (see right photo above) that secure the drum motor to the drum motor bracket and pull the motor straight back off the mounting screws.
4. Grasp the motor shaft with a pair of locking pliers and unscrew the rotator arm ("bullet") from the motor shaft and transfer it to the new motor.
5. Slip the new motor over the four mounting screws, being careful not to dislodge the screws. Replace and tighten the Keps nuts.
6. Reverse steps 1 and 2 to complete the procedure.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 5: REPLACING Sin B a D COMPONENTS

5.2.5 Replacing the Transformer or Line Filter

1. Disconnect the unit from the electrical power source.
2. Holding the new component next to the component being replaced, disconnect each wire from the old component and connect it to the new component, one at a time.
3. Remove the screws securing the old component to the mounting bracket, remove the old component, and install the new component.
4. Reconnect the unit to the electrical power source.

5.2.6 Replacing the Proximity Sensor

1. Disconnect the unit from the electrical power source.
2. Unplug the proximity sensor from the controller.
3. Depending upon date of manufacture, the proximity sensor may be held in place by a bracket or it may be screwed directly into the sensor-protecting block. If it is held in place by a bracket, follow steps **a** through **d** below. If not, unscrew the failed sensor from the block and replace it with the new sensor.
 - a. Remove the four hex-head screws securing the mounting bracket to the cabinet (these screws also secure the sensor-protecting block to the cabinet) and remove bracket and sensor from the cabinet.
 - b. Remove the mounting nut from the end opposite the wire to free the sensor from the bracket.
 - c. Remove the mounting nut from the new sensor and insert the sensor into the bracket. Adjust the rear spacing nut so that the sensor extends approximately 1½" (38mm) past the bracket. Replace and tighten the mounting nut.
 - d. Position the sensor and bracket in the cabinet cutout and screw one mounting screw in a couple of turns to stabilize the assembly while the protecting block is aligned on the other side. Replace the remaining screws and tighten all four.
4. Plug the sensor cable into jack J5 on the controller and reconnect the unit to the electrical power source.

5.2.7 Replacing the Motor Interface Board

1. Disconnect the unit from the electrical power source.
2. Holding the new interface board next to the one being replaced, disconnect each cable from the failed interface board and connect it to the new board, one at a time.
3. Remove the four Keps nuts securing the old board to its mounting and slip it off the mounting studs, being careful not to dislodge the spacers behind the board. Slip the new board onto the mounting studs and replace the Keps nuts.
4. Reconnect the unit to the electrical power source.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS

CHAPTER 6: REPLACING Sin B a D II COMPONENTS

6.1 Accessing Components in Sin B a D II Units

The unit's back panel must be removed to access all electronic components except the drum motor. The panel is held in place by two hex-head screws located along the bottom edge. A separate access panel must be removed to gain access to the drum motor. It is held in place with two hex-head screws. In order to access the ON/OFF switch and controller, the right cabinet top must also be removed. It is secured by two pan-head machine screws and Keps nuts at the left rear corner (as viewed from the rear of the unit) and one hex-head screw at the right rear corner. The front of the panel is held in place by a pair of tabs that fit into slots cut into the front of the cabinet. When the retaining screws have been removed, lift up on the rear and move the cabinet top toward the front to disengage the tabs.

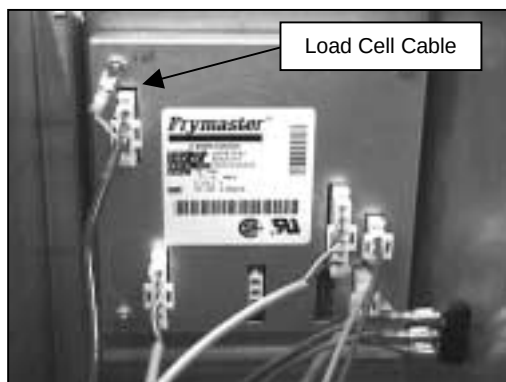
6.2 Replacing Components in Sin B a D II Units

6.2.1 Replacing the Controller

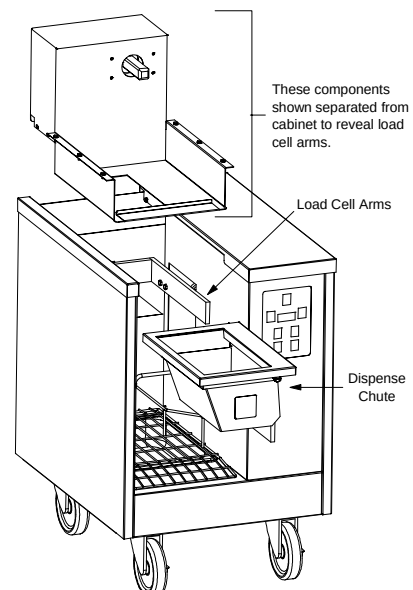
1. Disconnect the unit from the electrical power source.
2. Disconnect all cables from the jacks on the back of the controller. If the cables are not marked indicating their jacks, mark the cables before disconnecting them.
3. The controller is held in place by four Keps nuts. Remove the nuts and pull the controller straight rearward off the mounting studs.
4. Reverse steps 1-3 to install new controller.

6.2.2 Replacing the Load Cell and Associated Components

1. Disconnect the unit from the electrical power source.
2. Disconnect the load cell cable from the back of the controller (see photo below).

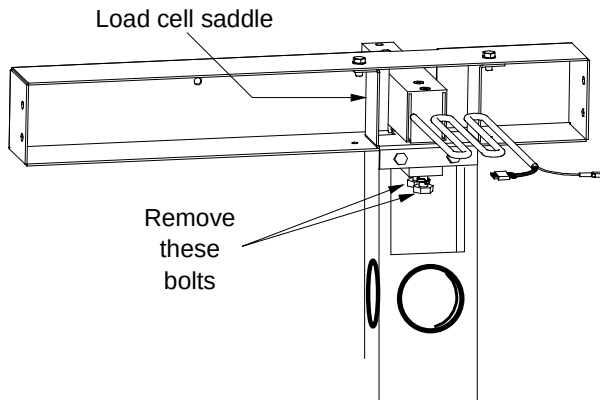
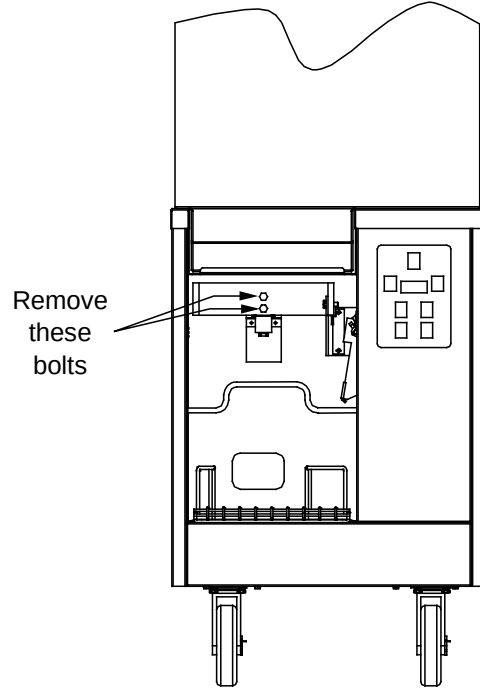


3. Remove the dispensing chute by lifting it up from the load cell arms and carefully sliding it toward you (see illustration at right).



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CHAPTER 6: REPLACING SinBaD II COMPONENTS

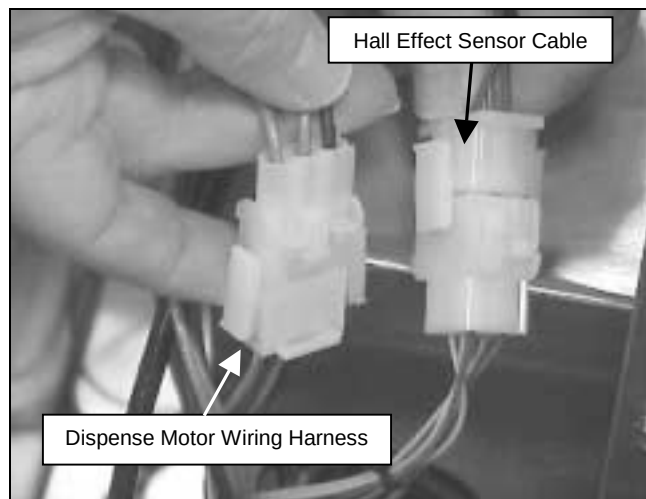
4. Remove the two bolts securing the load cell arms to the load cell (see illustration at right). Carefully lower the load cell arms/dispense motor assembly to the bottom of the dispense chamber.
5. Remove the two bolts securing the load cell/load cell brace assembly to the load cell saddle (see illustration below) and remove the load cell and load cell brace.



6. Reattach the replacement load cell and the load cell brace to the load cell saddle and securely tighten the bolts. Verify that the gap between the load cell and stop screw in the load cell brace is approximately .015 inch $\pm$.005 inch (.4mm $\pm$.13mm).
7. Reverse steps 1 through 4 to complete the procedure.

6.2.3 Replacing the Dispense Motor

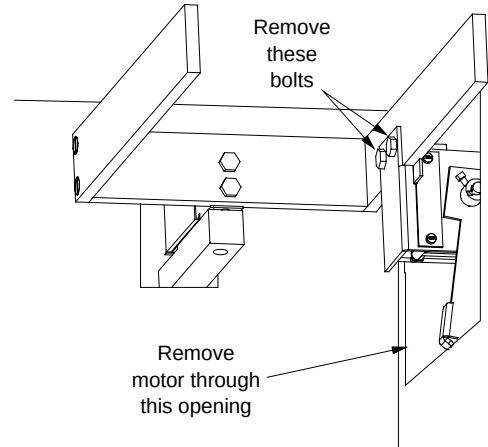
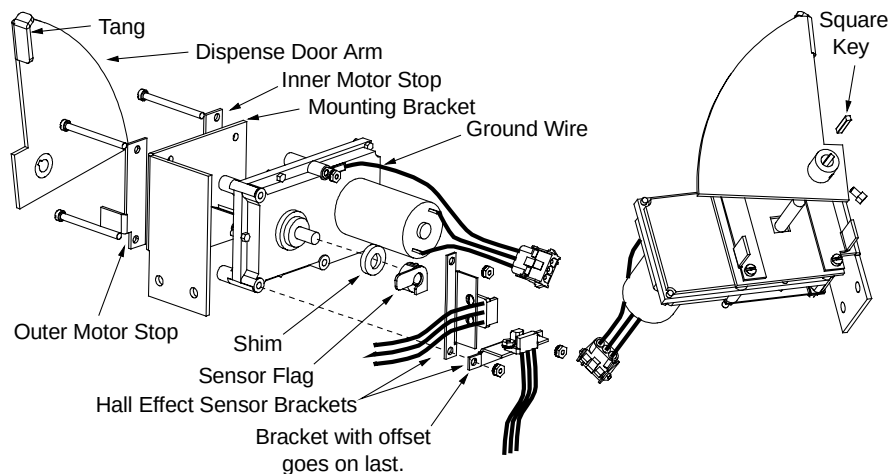
1. Disconnect the unit from the electrical power source and remove the back panel to access wiring.
2. Disconnect the dispense motor wiring harness and Hall Effect sensor cable (see photo below).



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CHAPTER 6: REPLACING Sin B a D II COMPONENTS

3. Remove the basket alignment rack from the dispensing well. Remove the two bolts securing the dispense motor to the load cell arms (see illustration at right). Be ready to support the approximate 6-pound/3-kilogram weight of the dispense motor assembly when the bolts are removed.
4. Carefully pull the dispense motor assembly out through the opening in the cabinet.
5. Remove the setscrew securing the dispense door arm to the motor shaft and slip the arm from the shaft, being careful not to lose the square key. Remove the four Keps nuts from the screws securing the motor assembly to the dispense motor bracket.



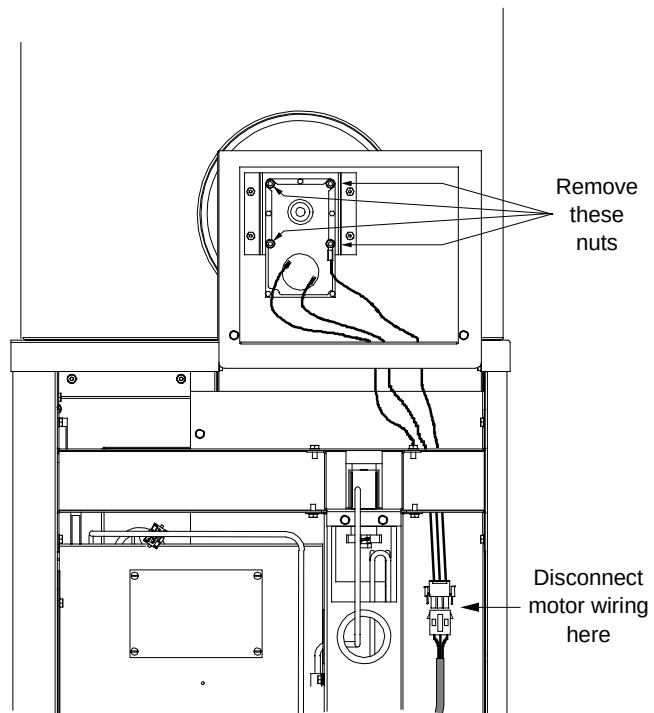
6. Loosen the setscrew securing the sensor flag to the motor shaft and slide the flag and shim (spacer) from the shaft.
7. Slip the Hall Effect sensor brackets off the mounting screws and separate the motor and mounting bracket.
8. Assemble the replacement motor to the bracket then replace the Hall Effect sensor brackets, installing the bracket with offset last (see illustration in step 3). Replace and tighten the four Keps nuts, torquing to 5-10 inches/pound. **NOTE:** Ensure the ground wire is reattached to the upper right hand mounting screw.
9. Insert the square key into the groove in the long motor shaft, align the slot in the dispense arm hub with the square key, and slip the arm onto the shaft with the hub on the outside (see illustration in step 3). **NOTE:** The door must be positioned between the motor stops (rotate the shaft, if necessary) and there must be at least $\frac{5}{16}$ " (8mm) clearance between the door and the motor. Torque the setscrew to 20-25 inches/pound.
10. Slip the shim (spacer) onto the short motor shaft, followed by the sensor flag (with the hub facing the shim). Rotate the dispense arm so that the tang is pointed up (see illustration in step 3) and the edge is resting on the inner motor stop.

Sin B a D & Sin B a D II SINGLE BASKET DISPENSERS
CHAPTER 6: REPLACING Sin B a D II COMPONENTS

11. Remove any slack in the motor shaft by placing the arm end on a work surface and gently pressing down on the motor. At the same time, rotate the sensor flag so that it is positioned between the faces of the upper (left) Hall Effect sensor. Verify that the arm is resting on the inner motor stop, then tighten the setscrew, torquing to 12 inches/pound.
12. Reinstall the dispense motor assembly by reversing steps 1 through 4.

6.2.4 Replacing the Drum Motor

1. Disconnect the unit from the electrical power source.
2. Disconnect the drum motor wiring from the drum motor cable (see illustration at right). **NOTE:** The drum motor cable plugs into the motor interface board and the motor wiring plugs into it. It is not necessary to disconnect the drum motor cable from the motor interface board.
3. Remove the four Keps nuts (see illustration at right) that secure the drum motor to the drum motor bracket and pull the motor straight back off the mounting screws.
4. Grasp the motor shaft with a pair of locking pliers and unscrew the rotator arm ("bullet") from the motor shaft and transfer it to the new motor.
5. Slip the new motor over the four mounting screws, being careful not to dislodge the screws. Replace and tighten the Keps nuts.
6. Reverse steps 1 and 2 to complete the procedure.



6.2.5 Replacing the Transformer or Line Filter

1. Disconnect the unit from the electrical power source.
2. Holding the new component next to the component being replaced, disconnect each wire from the old component and connect it to the new component, one at a time.
3. Remove the screws securing the old component to the mounting bracket, remove the old component, and install the new component.
4. Reconnect the unit to the electrical power source.

6.2.6 Replacing the Proximity Sensor

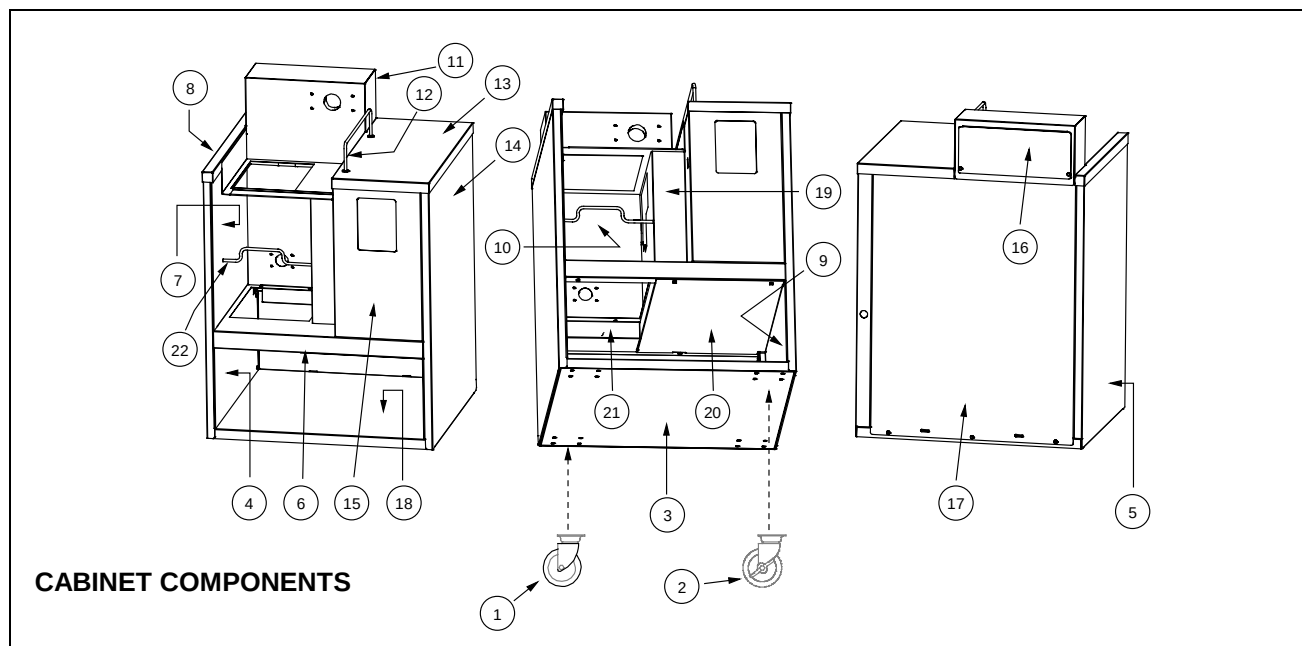
1. Disconnect the unit from the electrical power source.
2. Unplug the proximity sensor from the controller.
3. Unscrew the failed sensor from the block. Thread the stop nut on the replacement sensor back toward the cord-end until approximately ½ inch (12.7mm) of threads remain. Carefully screw the replacement sensor into the Teflon block until it is finger tight. Tighten the stop nut against cabinet.
4. Plug the sensor cable into jack J5 on the controller and reconnect the unit to the electrical power source.

6.2.7 Replacing the Motor Interface Board

1. Disconnect the unit from the electrical power source.
2. Holding the new interface board next to the one being replaced, disconnect each cable from the failed interface board and connect it to the new board, one at a time.
3. Remove the four Keps nuts securing the old board to its mounting and slip it off the mounting studs, being careful not to dislodge the spacers behind the board. Slip the new board onto the mounting studs and replace the Keps nuts.
4. Reconnect the unit to the electrical power source.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 7: Sin Ba D PARTS LIST

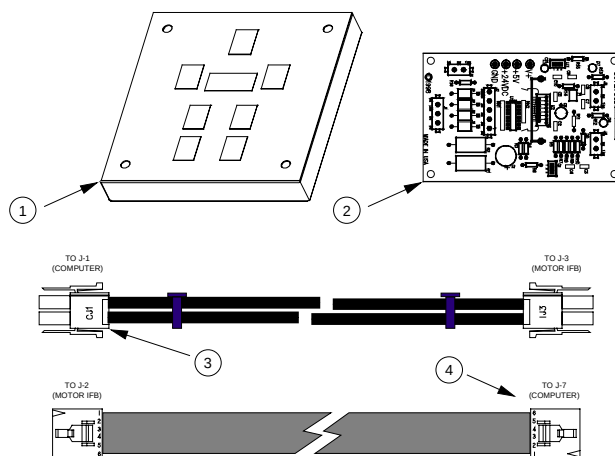


ITEM	PART #	COMPONENT
1	810-0356	Caster, 5" wheel, w/o brake (for optional 3" caster P/N, see page 8-1)
2	810-0357	Caster, 5" wheel, w/brake (for optional 3" caster P/N, see page 8-1)
3	806-9250	Base Channel Assembly
4	910-7899	Liner, Lower Cabinet, Left
5	910-7879	Side, Cabinet, Left
6	910-7877	Liner, Dispensing Chamber Bottom
7	910-7876	Side, Dispensing Chamber, Left
8	806-8953	Cabinet Top Assembly, Left
9	910-7900	Liner, Lower Cabinet, Right
10	910-7893	Back, Dispensing Chamber
11	823-2662	Drum Motor Housing/Dispensing Chute Cradle
12	810-1572	Rod, Hopper Support
13	806-8952	Cabinet Top Assembly, Right (includes Hopper Support Rod 810-1572)
14	910-8305	Side, Cabinet, Right
15	823-2671	Panel Assembly, Front
16	900-7890	Panel, Drum Motor Access
17	900-7884	Panel, Back
18	824-0749	Base, Cabinet
19	910-7918	Side, Dispensing Chamber, Right
20	900-7901	Cover, Large Screw
21	900-7902	Cover, Small Screw
22	810-1644	Rod, Basket Guide
*	900-7881	Brace, Upper Back
*	900-7892	Brace, Front-to-Back
*	900-7894	Brace, Middle Back

* Not illustrated.

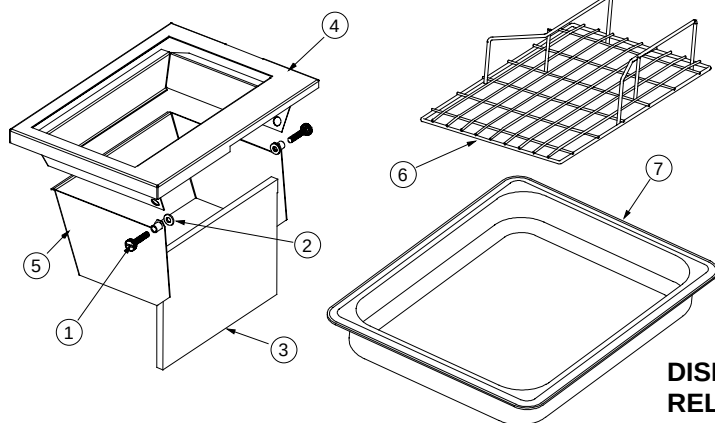
Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 7: Sin Ba D PARTS LIST



CONTROLLER and MOTOR INTERFACEBOARD COMPONENTS

ITEM	PART #	COMPONENT
1	806-8970	Controller Assembly
2	806-8684	Motor Interface Board
3	806-8957	Cable, Computer/Interface Board 12VDC Power
4	807-2919	Cable, Computer/Interface Board Signal

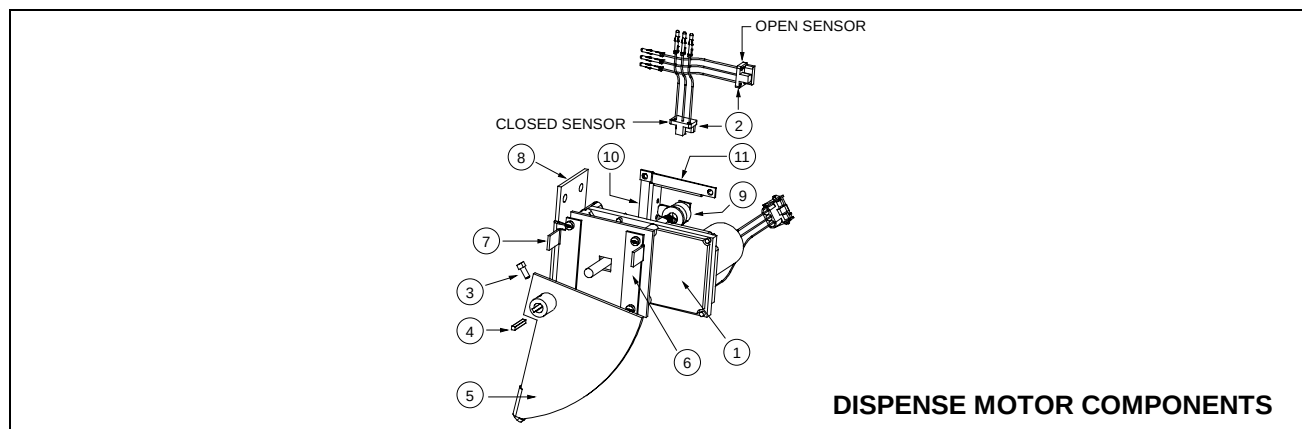


DISPENSE CHUTE AND RELATED COMPONENTS

ITEM	PART #	COMPONENT
1	809-0171	Thumbscrew
2	809-0193	Washer, Flat, Nylon, 1/4"
3	816-0400	Dispensing Chute Door
4	823-2716	Dispensing Chute Frame
5	823-2717	Dispensing Chute
6	803-0255	Rack, Basket Alignment
7	816-0350	Crumb Pan, Plastic

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

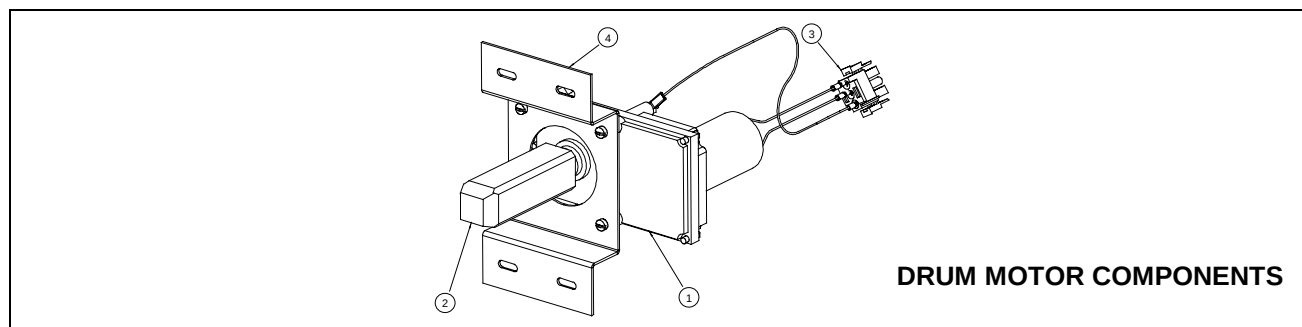
CHAPTER 7: Sin Ba D PARTS LIST



DISPENSE MOTOR COMPONENTS

ITEM	PART #	COMPONENT
1	807-3004	Dispense Motor
2	806-8969	Hall-Effect Sensor Assembly
3	809-0674	Set Screw, 8 – 32 x 1/2"
4	810-1391	Key, Square, 1/8" x 3/4"
5	823-2670	Arm, Dispense Motor
6	910-7949	Stop, Dispense Motor, Inner
7	910-7950	Stop, Dispense Motor, Outer
8	900-5855	Bracket, Dispense Motor
9	823-2607	Flag, Hall Effect Sensor
10	910-8164	Bracket, Hall Effect Sensor Lower
11	910-8165	Bracket, Hall Effect Sensor Upper
*	807-2911	Cable, Hall Effect Sensor to Interface Board Terminal J2 and J3
*	807-2912	Cable, Dispense Motor to Computer Terminal J5
*	900-8169	Shim (Hall effect sensor flag spacer)

* Not illustrated.

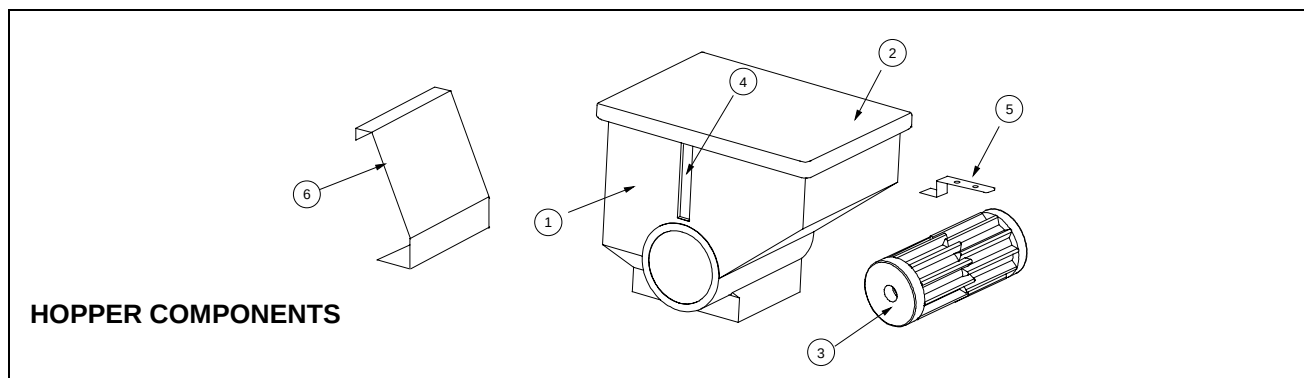


DRUM MOTOR COMPONENTS

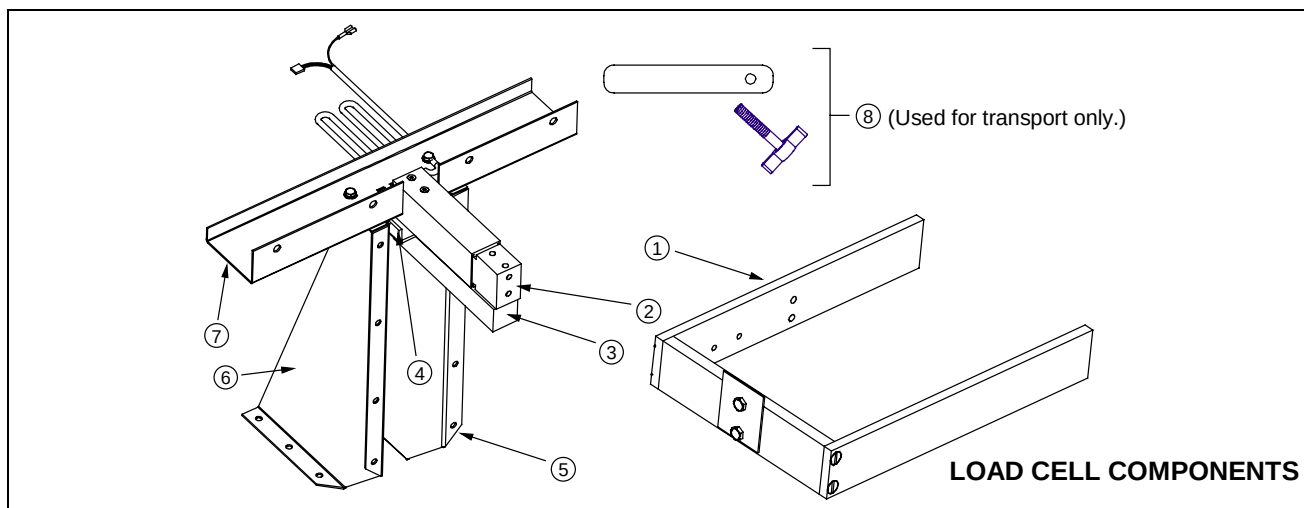
ITEM	PART #	COMPONENT
1	807-3003	Drum Motor
2	810-1571	Arm, Drum Rotator ("Bullet")
3	807-1497	Connector, 3-Pin, Male
4	900-7898	Bracket, Drum Motor
*	807-2915	Cable, Drum Motor to Computer Terminal J4

* Not illustrated.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS
CHAPTER 7: Sin Ba D PARTS LIST



ITEM	PART #	COMPONENT
	806-8888	Hopper Assembly, Complete
1	823-2650	Hopper
2	806-8960	Lid w/handle
3	816-0330	Drum
4	816-0324	Sight Glass
5	910-7920	Handle
6	910-7882	Deflector

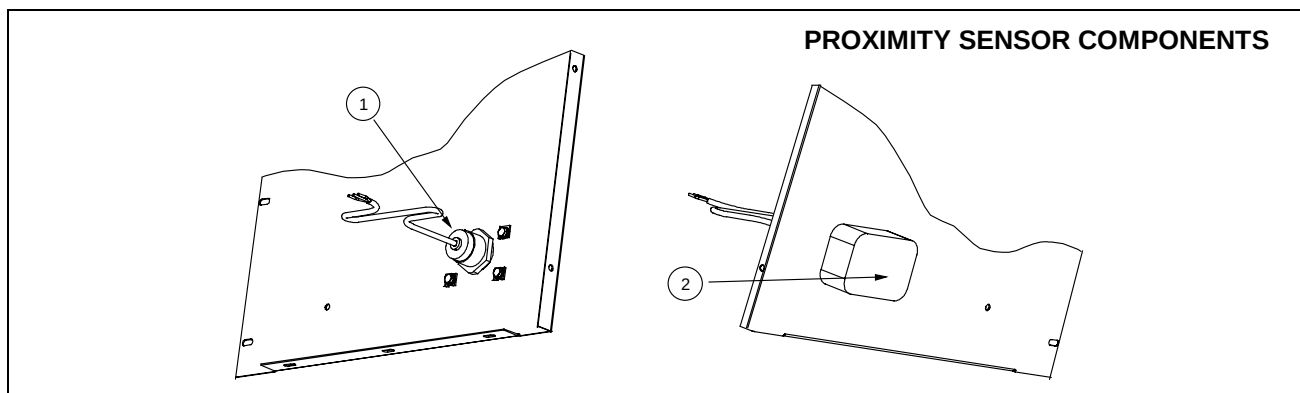


ITEM	PART #	COMPONENT
1	806-8843	Load Cell Arms Assembly
2	806-9258SP	Load Cell (also requires retrofit cable P/N 807-3070)
3	810-1666	Load Cell Brace
4	900-5982	Load Cell Saddle
5	824-0682	Load Cell Gusset, Left
6	824-0681	Load Cell Gusset, Right
7	900-7774	Load Cell Stiffener
8		Transport Protector (screw assembly 806-9272 + shim 810-1675)
*	809-0649	Bolt, 1/4 x 20, 1.5" (attaches load cell to load cell brace)

* Not illustrated.

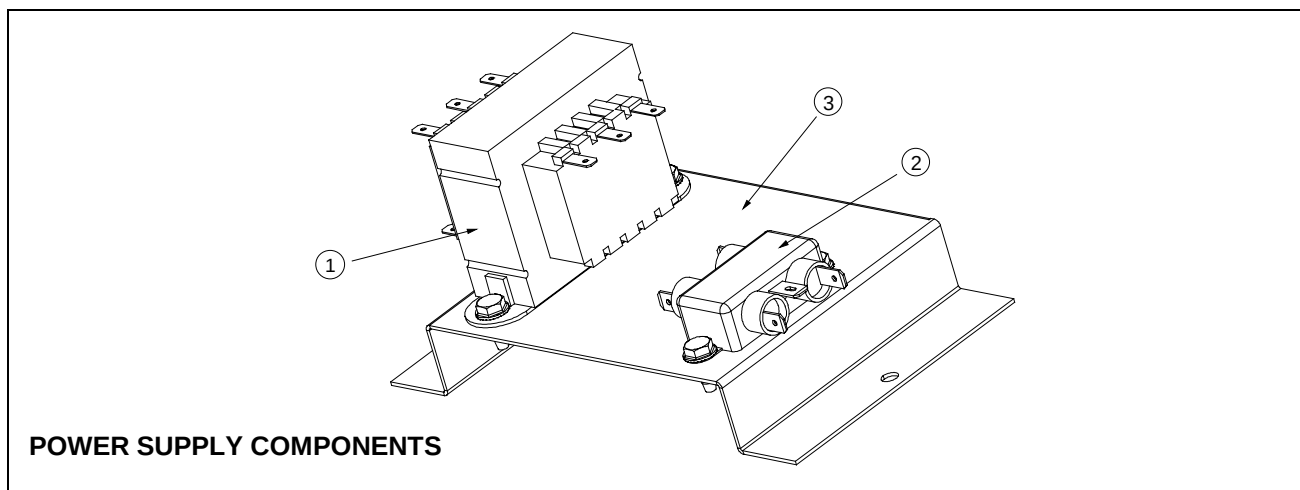
Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 7: Sin Ba D PARTS LIST



ITEM	PART #	COMPONENT
1	806-9259	Proximity Sensor Assembly (also requires retrofit cable P/N 807-3069)
2	816-0402	Block, Proximity Sensor (universal, used with or without bracket)
*	900-5966	Bracket, Proximity Sensor (for units manufactured with brackets)

* Not illustrated.

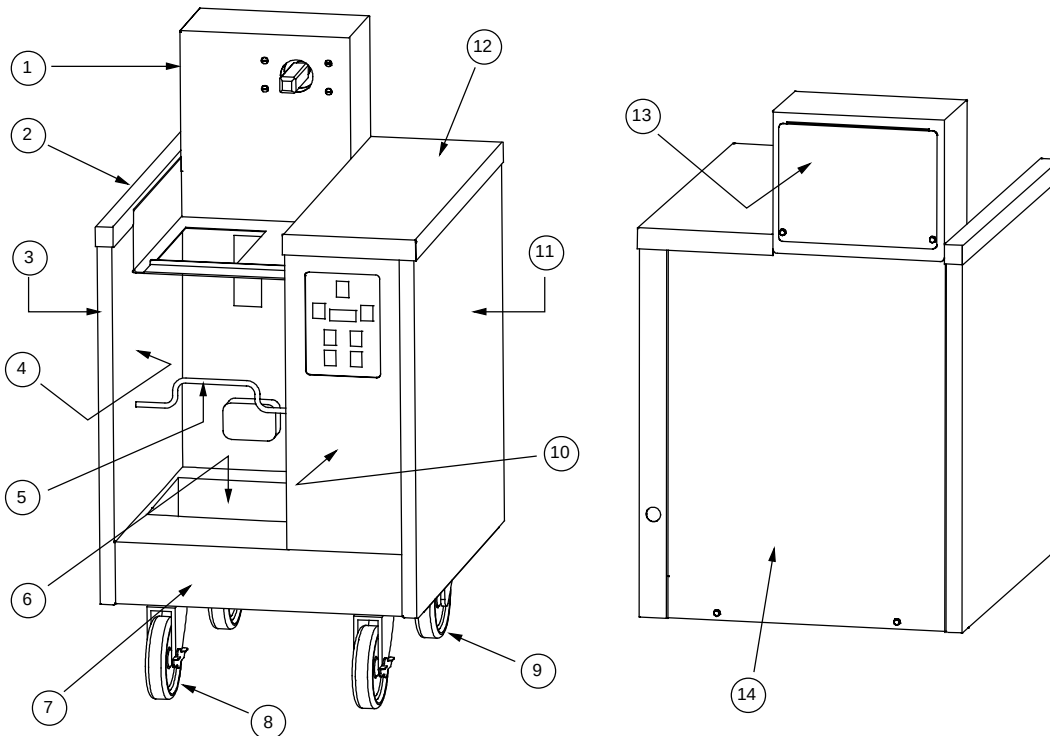


ITEM	PART #	COMPONENT
1	807-2943	Transformer, 115/230V-24V
1	807-3185	Transformer, 230V-24V (Used on CE units only)
2	807-2818	Line Filter, EMI, 120/250V
3	900-7888	Bracket, Transformer Mounting
*	807-2138	Fuse (Used on CE units only)
*	807-3127	Fuse Holder (Used on CE units only)
*	807-2734	Switch, ON/OFF, Illuminating, Green
*	806-8956	Cable, Transformer to Motor Interface Board
*	806-8889	Power Cord, 120VAC
*	807-1685	Power Cord, 208/240VAC
*	807-1694	Strain Relief, Power Cord

* Not illustrated.

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST

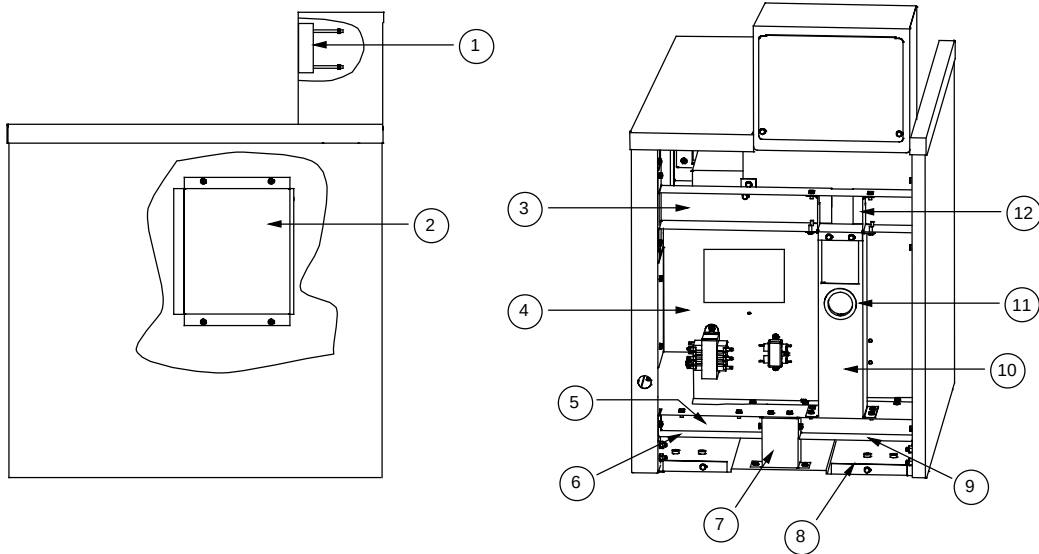


CABINET COMPONENTS - EXTERNAL

ITEM	PART #	COMPONENT
1	823-2743	Cradle
2	806-9235	Top Cover, Left
3	910-8209	Side, Left Cabinet
4	910-8227	Side, Dispense Chamber
5	810-1644	Guide, Basket
6	824-0744	Well, Crumb Pan
7	910-8226	Liner, Bottom
8		Caster, w/Brake
	810-1735	3-inch
	810-0357	5-inch
9		Caster, w/o Brake
	810-0949	3-inch
	810-0356	5-inch
10	823-2761	Panel, Front
11	910-8219	Side, Right Cabinet
12	806-9228	Top Cover, Right
13	900-8324	Panel, Drum Motor Access
14	900-8208	Panel, Back

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST



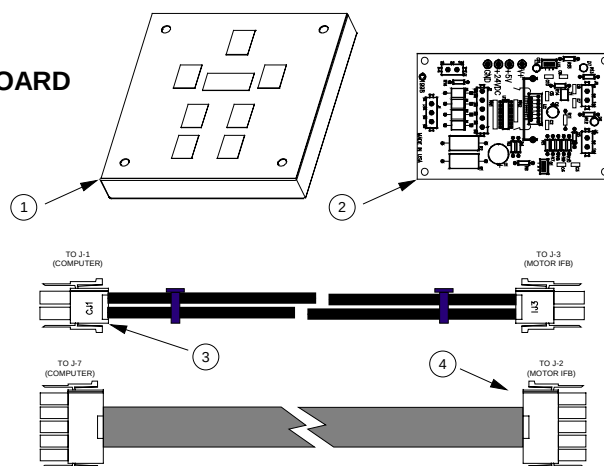
CABINET COMPONENTS - INTERNAL

ITEM	PART #	COMPONENT
1	900-8302	Bracket, Drum Motor
2	824-0752	Cover, Dispense Motor
3	900-8211	Brace, Upper Back
4	900-8474	Mount, Interface Board and Transformer
5	910-8227	Liner, Inner Cabinet
6	900-8223	Brace, Left Lower Back
7	900-8205	Support, Base
8	806-9216	Base Assembly
9	900-8352	Brace, Right Lower Back
10	900-8224	Brace, Vertical
11	807-1083	Bushing
12	900-8233	Saddle, Load Cell

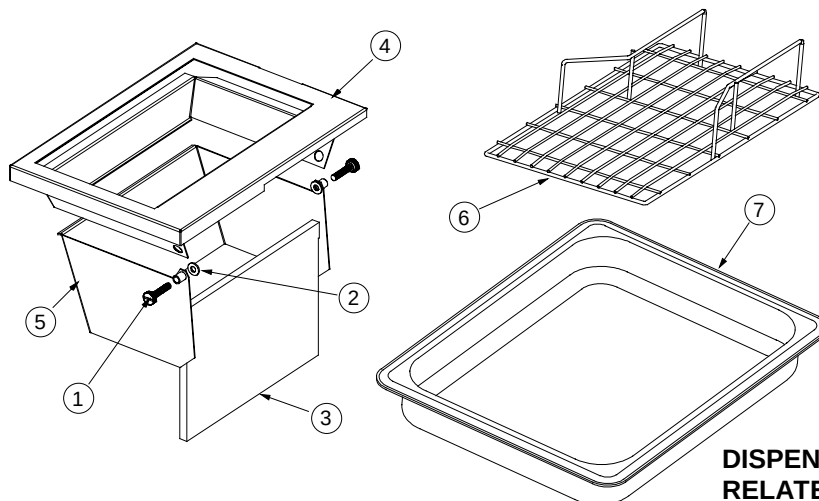
Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST

CONTROLLER and MOTOR INTERFACE BOARD COMPONENTS



ITEM	PART #	COMPONENT
1	806-9297	Controller Assembly
2	806-9383	Motor Interface Board (located on IFB/Transformer mount)
3	806-8957	Cable, Computer/Interface Board 12VDC Power
4	807-3058	Cable, Computer/Interface Board Signal

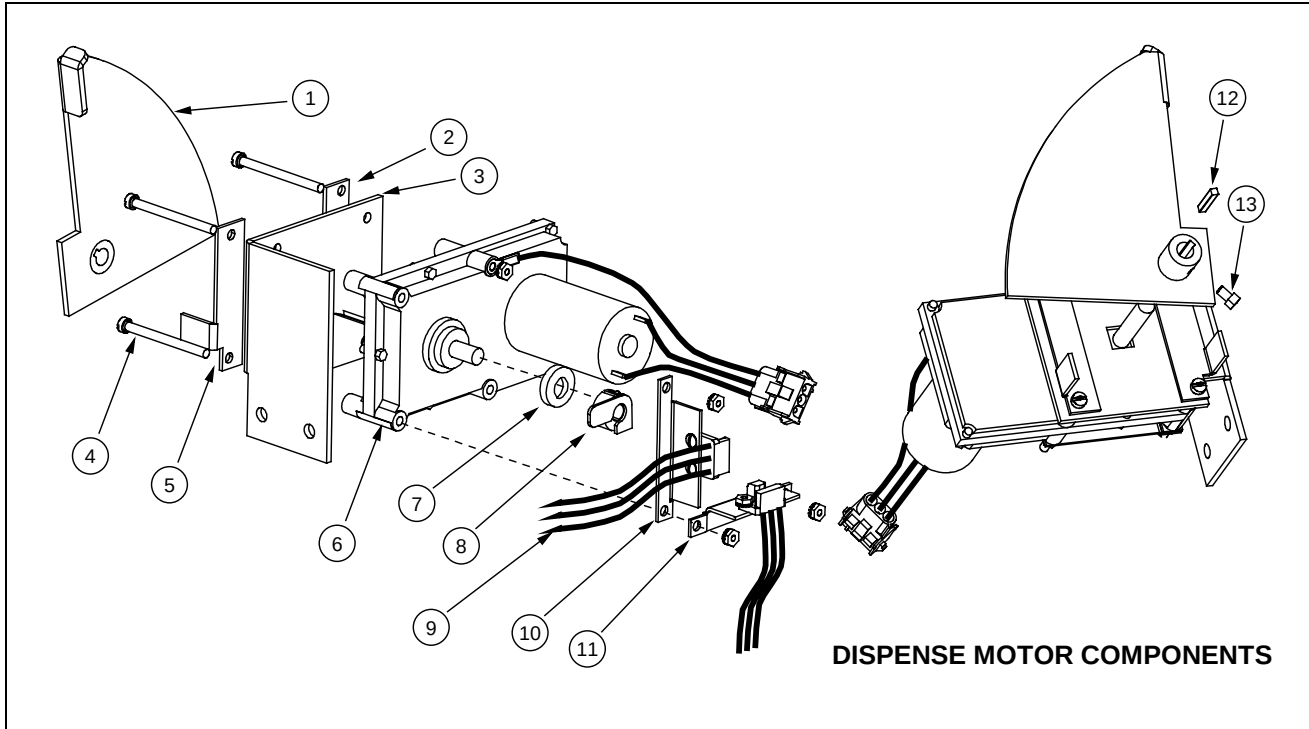


DISPENSE CHUTE AND RELATED COMPONENTS

ITEM	PART #	COMPONENT
1	809-0171	Thumbscrew
2	809-0193	Washer, Flat, Nylon, 1/4"
3	816-0400	Dispensing Chute Door
4	823-2716	Dispensing Chute Frame
5	823-2717	Dispensing Chute
6	803-0255	Rack, Basket Alignment
7	816-0350	Crumb Pan, Plastic

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST

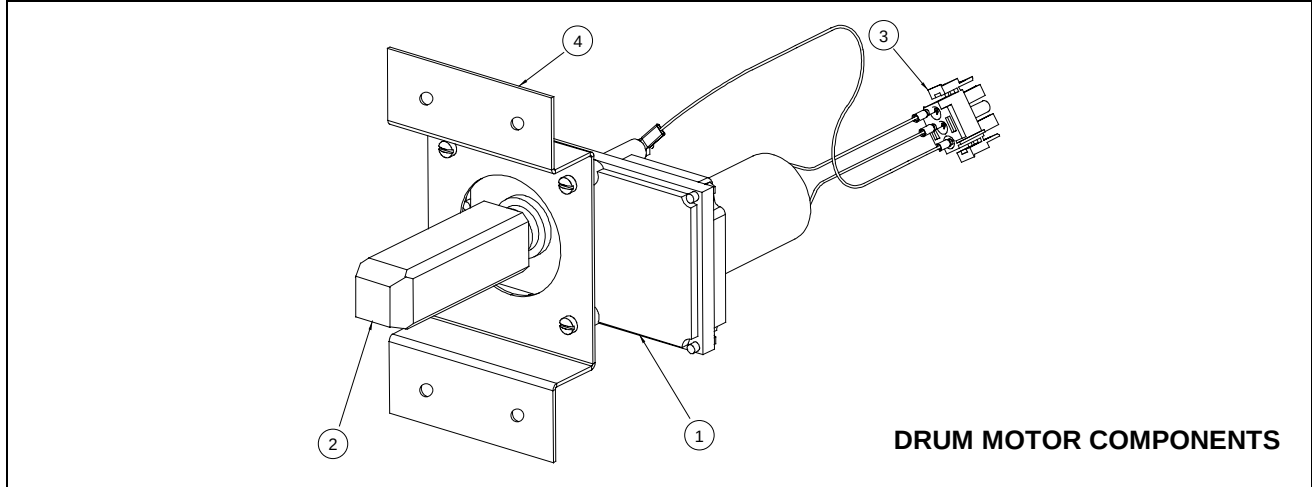


ITEM	PART #	COMPONENT
1	823-2670	Arm, Dispense Motor
2	910-7949	Stop, Dispense Motor, Inner
3	900-5855	Bracket, Dispense Motor
4	809-0613	Screw, 8 – 32 x 2.00 inches
5	910-7950	Stop, Dispense Motor, Outer
6	807-3004	Dispense Motor
7	900-8169	Shim (Hall Effect Sensor Flag spacer)
8	823-2607	Flag, Hall Effect Sensor
9	806-8969	Hall-Effect Sensor Assembly
10	910-8164	Bracket, Hall Effect Sensor (w/o offset)
11	910-8165	Bracket, Hall Effect Sensor (w/offset)
12	810-1391	Key, Square, 1/8" x 3/4"
13	809-0674	Set Screw, 8 – 32 x 1/2"
*	807-2911	Cable, Hall Effect Sensor to Interface Board Terminal J2 and J3
*	807-2912	Cable, Dispense Motor to Computer Terminal J5

*Not Illustrated.

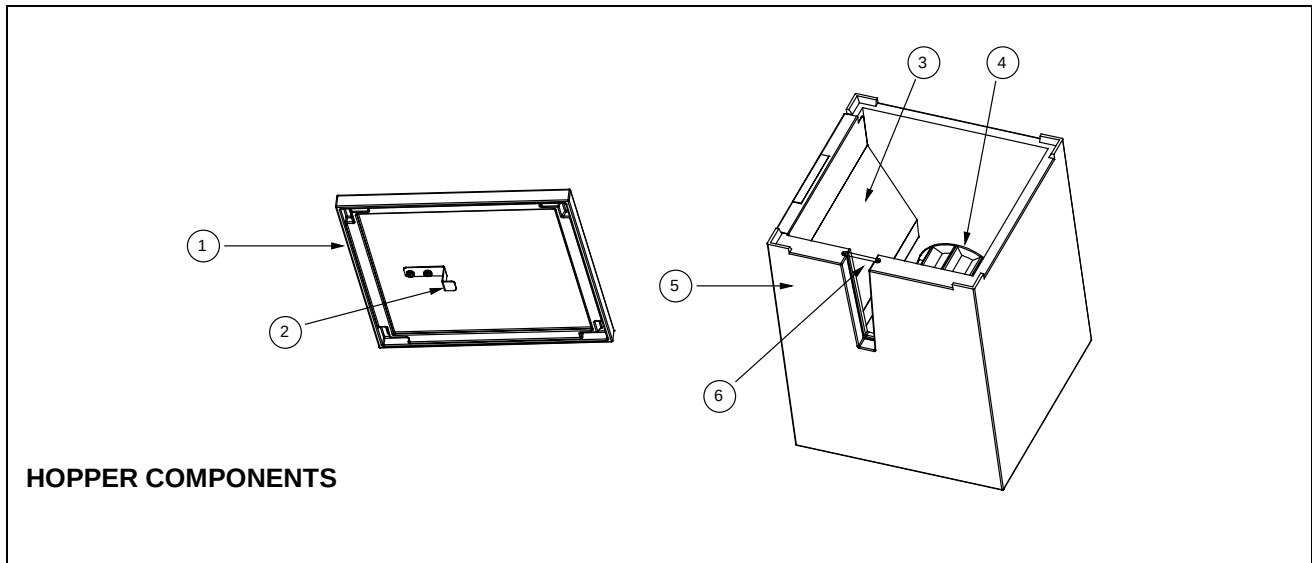
Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST



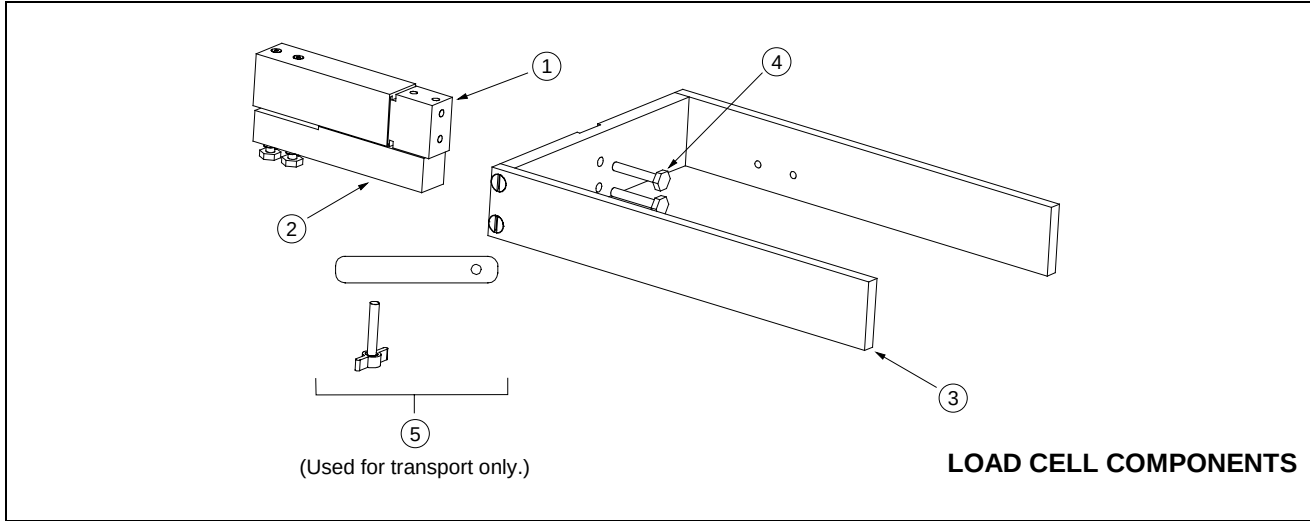
ITEM	PART #	COMPONENT
1	807-3003	Drum Motor
2	810-1571	Arm, Drum Rotator ("Bullet")
3	807-1497	Connector, 3-Pin, Male
4	900-8302	Bracket, Drum Motor
*	807-2915	Cable, Drum Motor to Computer Terminal J4

*Not Illustrated.

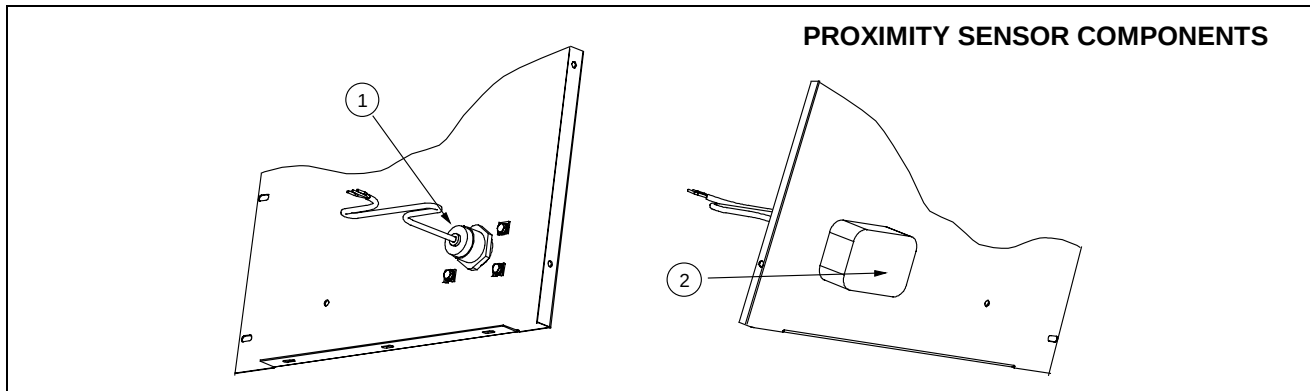


ITEM	PART #	COMPONENT
1	816-0413	Lid
2	910-7920	Handle
3	910-8688	Deflector
4	816-0378	Drum
5	816-0412	Hopper
6	816-0419	Sight Glass

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS
CHAPTER 8: Sin Ba D II PARTS LIST



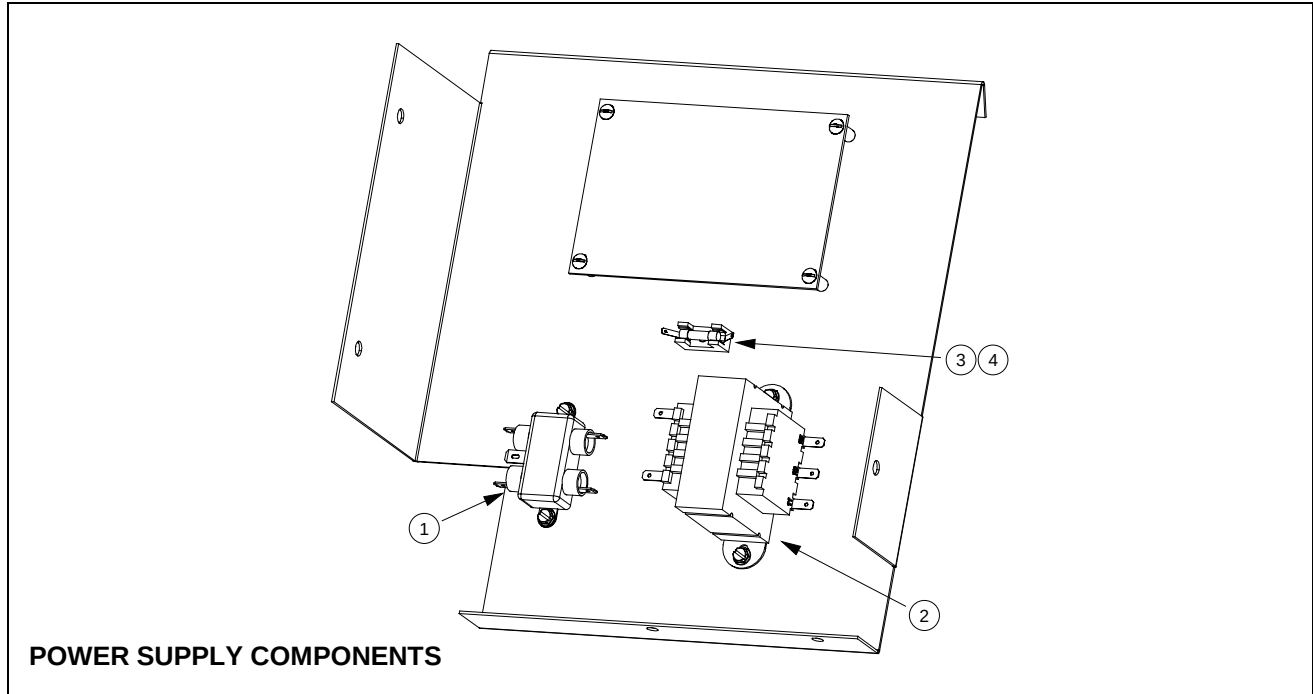
ITEM	PART #	COMPONENT
1	806-9258SP	Load Cell
2	810-1666	Load Cell Brace
3	806-9271	Load Cell Arms Assembly
4	809-0649	Bolt, 1/4 x 20, 1.5"
5		Transport Protector (screw assembly 806-9272 + shim 810-1675)



ITEM	PART #	COMPONENT
1	806-9259	Proximity Sensor Assembly
2	816-0402	Block, Proximity Sensor

Sin Ba D & Sin Ba D II SINGLE BASKET DISPENSERS

CHAPTER 8: Sin Ba D II PARTS LIST



ITEM	PART #	COMPONENT
1	807-2818	Line Filter, EMI, 120/250V
2	807-2943	Transformer, 115/230V-24V
2	807-3185	Transformer, 230V-24V (Used on CE units only)
3	807-3128	Fuse (Used on CE units only)
4	807-3127	Fuse Holder (Used on CE units only)
*	807-2734	Switch, ON/OFF, Illuminating, Green
*	806-8956	Cable, Transformer to Motor Interface Board
*	806-8889	Power Cord, 120VAC
*	807-1685	Power Cord, 208/240VAC
*	807-1694	Strain Relief, Power Cord

*Not Illustrated.