

MARSHALL

AUTOBROIL™
OWNER'S MANUAL
MODEL FR15B FR69B 126B
WITH TOUCHSCREEN CONTROL
(DK8 SERIES, DK3-126)

Important: Keep in safe, easy-to-find location.

Marshall Air Systems, Inc.
419 Peachtree Drive South
Charlotte, North Carolina USA 28217
704-525-6230
704-525-6229 FAX

Sales and Service
1-800-722-3474

(24 Hour Hotline, Telephone Assistance Available for Diagnostic and Troubleshooting)

OWNERS MANUAL

MODEL FR15B FR69B 126B AUTOBROIL™ WITH TOUCHSCREEN CONTROL



This document contains the installation and operating instructions for:

MODEL: FR15B FR69B 126B AUTOBROIL™ (DK8 SERIES, DK3-126B) With Touchscreen Control

INSTRUCTIONS TO PURCHASER:

1. **KEEP THIS MANUAL IN A SAFE PLACE AND RETAIN FOR FUTURE REFERENCE.**

FOR YOUR SAFETY



DO NOT STORE OR USE GASOLINE OR OTHER
FLAMMABLE VAPORS OR LIQUIDS IN THE
VICINITY OF THIS OR ANY OTHER APPLIANCE



AVERTISSEMENT

Ne pas entreposer ni utiliser de l'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil, ni de tout autre appareil.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

AVERTISSEMENT: Une installation, un ajustement, une altération, un service ou un entretien non conforme aux normes peut causer des dommages à la propriété, des blessures ou la mort. Lisez attentivement les directives d'installation et d'opération et d'entretien avant de faire l'installation ou l'entretien de cet équipement

Broiler area must be kept free of combustible materials and the flow of combustion and ventilation air must not be obstructed. Operating personnel must not perform any maintenance or repair functions. Contact your Qualified Service Company.

SYMBOLS UTILIZED IN THIS MANUAL



WARNING



**INFORMATION FOR
ELECTRIC BROILER**

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Wiring Schematic FR15B (415/240-380/220V 3PH Wye w/ Touchscreen)	Dwg #169281
Wiring Schematic FR69B (440V 3PH Delta w/ Touchscreen).....	Dwg #182589

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I. BROILER SETTINGS

DK8 SERIES:

BROILER ACTUAL OPERATING RANGE: 500°F TO 760°F

FOR BEST COOKING RESULTS, TEMPERATURE SET POINT(S) MUST BE WITHIN BROILER OPERATING RANGE. COOKING WITH TEMPERATURES SET POINT(S) OUTSIDE THE OPERATING RANGE WILL RESULT IN PRODUCT INCONSISTENCY.

DK3-126B:

BROILER ACTUAL OPERATING RANGE: 500°F TO 1400°F

FOR BEST COOKING RESULTS, TEMPERATURE SET POINT(S) MUST BE WITHIN BROILER OPERATING RANGE. COOKING WITH TEMPERATURES SET POINT(S) OUTSIDE THE OPERATING RANGE WILL RESULT IN PRODUCT INCONSISTENCY.

AUTOBROIL™

MODEL: FR15B FR69B 126B W/ TOUCHSCREEN CONTROL

MODEL NUMBER: _____

SERIAL NUMBER: _____

ELECTRICAL SUPPLY: _____ SCHEMATIC NUMBER: _____ REV. _____

MENU SETTINGS:

Belt 1

	<u>RECIPE NAME</u>	<u>COOK TIME</u>	<u>TEMPERATURE SET POINT</u>
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

Belt 2

	<u>RECIPE NAME</u>	<u>COOK TIME</u>	<u>TEMPERATURE SET POINT</u>
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

MARSHALL AIR SYSTEMS REPRESENTATIVE CONTACT _____

START-UP TECHNICIAN: _____ SERVICE AGENCY: _____

ADDRESS: _____ CITY/STATE: _____ ZIP: _____

TELEPHONE: _____ PAGER: _____ FAX: _____

START-UP DATE: _____

COMMENTS: _____

A 24-hr hotline telephone assistance is available for diagnostics and troubleshooting 1-800-722-3474.

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II. EQUIPMENT INSTALLATION

PERFORMANCE CRITERIA

Make certain that voltage is within 10% of the unit's rated voltage and neutral is, in fact, neutral. Serious damage will be caused by having voltage on neutral.

BROILER CODE	ELECTRICAL SUPPLY	AMPERAGE
DK3-126B	208V 1PH	L1: 39A L2: 39A N:0 G:0
DK8	208/240V 3 Ph Delta	L1: 22/25 L2: 22/25 L3: 22/25 N: N/A G: 0
DK8EP	208/240V 3 Ph Delta	L1: 22/25 L2: 22/25 L3: 22/25 N: N/A G: 0
DK8INTLCE	415/240-380/220 3Ph Wye	L1: 13/14 L2: 13/14 L3: 13/14 N: 12/13 G: 0
DK8-69DQ & DK8-69ZXB	208V 3 Ph Delta	L1: 18 L2: 24 L3: 21 N: N/A G: 0
DK8-69INTLCE	415/240-380/220 3Ph Wye	L1: 13/14 L2: 13/14 L3: 13/14 N: 12/13 G: 0
DK8-69R440VCE	440 3PH Delta	L1: 9 L2: 12 L3: 10 N: N/A G: 0

PRE-INSTALLATION

1. After uncrating the Autobroil™ unit, inspect for shipping damage. Check that the controller, switches, and components are intact on the electrical cabinet front. Set the Autobroil™ in place and use the plastic bag to protect it from the debris and trash of building construction. Check that side skins have not been dented or damaged by the carrier. If damaged, notify your freight carrier immediately to file a concealed damage claim, following the instructions attached to the outside of the shipping crate. Your warranty will not cover freight damage.
2. Because this unit is required to be power fan exhausted, it is necessary to provide adequate make up air equal to the amount of air removed. In addition to this, any other exhausts, flues, or air removal systems must be taken into consideration. Examples of this are heat removal fans or hot water heater flues.

CAUTION: DO NOT OBSTRUCT THE FLOW OF VENTILATION AIR.

EQUIPMENT LOCATION

1. Position Autobroil™ to properly align with exhaust hood. Check name plate for clearance requirements.
2. The hood/ventilator for the catering equipment should be located in accordance with the National Fire Protection Association Standard #96, "Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment" and any local applicable requirements.
3. For proper installation, the minimum clearance from combustible construction is 6" (152mm) from sides and 6" (152mm) from back.
4. Adequate clearance should be maintained to allow easy access to loading and unloading areas of the machine.
5. For servicing, unit must be moved 2' (610mm) clear from all construction.
6. For DK3-126BCD see Figure 8 for power cord orientation.

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ELECTRICAL INFORMATION

1. The Electrical Schematic is inside the electrical cabinet and a copy is also included at the back of this manual. Make certain the supply voltage and number of supply conductors agrees with the Electrical Schematic. The load-carrying conductors should be sized according to the loads shown on the Electrical Schematic per local codes and the National Electrical Code, ANSI/NFPA 70 -Latest Edition. If the broiler is supplied with a cord, it will be type SOOW 90 DEG C or higher (See electrical schematic for proper cord size). The cord will be approximately 7 feet long.
2. On a new electrical service - **MAKE CERTAIN THAT VOLTAGE IS WITHIN 10% OF THE UNIT'S RATED VOLTAGE.** Appliance should be protected by a properly-sized circuit breaker furnished from the main building circuit panel per local codes and the National Electrical Code, ANSI/NFPA 70.

PRE-OPERATION CHECK (START-UP)

Before operating your Autobroil™, make a quick check of critical items as follows:

1. **Remove both side panels and check to see that all parts are in place and that none are damaged.**
2. Start conveyor chain and check for binding. The conveyor chain should run free and not be catching on any parts.
3. The speed of the conveyor chain should be changed from slow to fast, and back again without the chain stopping.
4. Check that no "binding" and resultant conveyor overloading is present. With the electrical connections complete and with the electrical cabinet door secured shut, turn the conveyors "**ON**" (See Conveyor Only section in operating instructions page 17). The conveyor should move forward in smooth unaltered motion. Shut down immediately if there is any evidence of "binding" or other mechanical blockage.
5. Proper conveyor operation is when the amperage draws in the white or black motor lead from the circuit board to the motor cord measures .15 DC amps or less. To check amperage, the cabinet door will need to be open. **THIS PROCEDURE SHOULD ONLY BE PERFORMED BY A QUALIFIED ELECTRICIAN.**
6. The Autobroil™ was tested at the factory before shipping so excessive amperage will indicate conveyor binding caused by shipping damage. Remove the roller chain (Figure 4) driving the conveyor in question and move the conveyor by hand. Loosen the sprockets (Figure 6) that drive the various axles and reposition them by 1/32" (1mm) until the conveyor tightness is eliminated. Twenty-five inch pounds of torque is required to drive a properly set up conveyor.
7. After the conveyor checkout is complete, turn the broiler on by pressing and holding the "ON" button for 2 seconds. All heater elements should glow red. After the unit is up to temperature, the elements will cycle. For trouble shooting problems, see Section VI.
8. Before first use, and after any special cleaning, it is necessary to "season" the **BROILER** chain. This is done by bringing the broiler chain to operating temperature and applying liquid shortening from a saturated cloth over the full width of the broiler chain while the chain makes five or six complete revolutions.
9. Check to see that the broiler grease tray is in place (Figure 2).

BROILER ADJUSTMENT


The Autobroil™ requires 30 minutes to reach stable temperature. After this time lapse, the conveyor speed can be set to properly cook the product. The control will display "READY" when the broiler reaches cooking temperature.

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SHUT-OFF INSTRUCTIONS

1. Press and hold the power button  for 2 seconds. The heat will turn off and the conveyors will continue to run until the broiler cools. The conveyors will turn off automatically after cooling.

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III. OPERATING INSTRUCTIONS

OPERATION OF THE TOUCHSCREEN USER INTERFACE

OFF MODE

Once the broiler is connected, the touch screen user interface OFF mode home screen will show up.



OFF MODE – HOME SCREEN



Power Button:

In this mode, the power button is red indicating that all heaters and conveyors are off. To turn the broiler on and go to PREHEATING mode, press the power button for 2 seconds.



Tools Button:

A press of the tools button will bring the user to the first page of the available tools. There is a total of 8 tools (4 per page) available to the user. See the **TOOLS** section pages 9-17 for more details.



Food Probe button:

The food probe button allows the user to take live temperature readings of food products as well as recording temperature readings of the different food products (recipes) that can be retrieved later using a USB flash drive. In off mode, the food probe button is grayed out indicating that the food probe functionalities are inactive. See **FOOD PROBE** section page 7 for more details.

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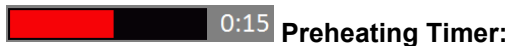


PREHEATING MODE

Once turned on, the broiler will go to the PREHEATING mode and start heating. The conveyor belts will also start running at the slowest recipe speed. The PREHEATING mode is to allow the broiler to reach temperature set point before cooking. The PREHEATING mode home screen is shown below.



PREHEATING MODE – HOME SCREEN



The preheating timer shows the remaining preheating time in minutes while the timer bar gives the user a quick reference of the remaining time versus total time. Once the preheating timer has elapsed, the broiler will go to the READY mode.



In this mode, the power button is green indicating that all heaters and conveyors are on. To turn the broiler off, press the power button for 2 seconds and the broiler will go to the cool down mode for ten minutes before going to the OFF mode.



A press of the tools button will bring the user to the first page of the available tools. Note that while the broiler is in PREHEATING mode, only the first page of the tools is available. See the **TOOLS** section pages 9-17 for more details.

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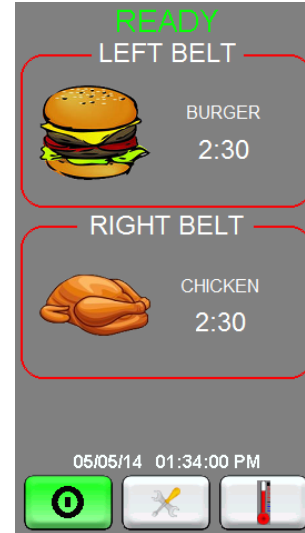


READY MODE

After the preheat timer elapsed, the broiler goes to the READY mode. The READY mode home screens for a single belt (Model FR15B) and a dual belt (Model FR69B) unit are shown below.



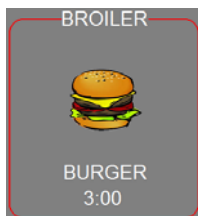
**SINGLE BELT – MODEL FR15B
READY MODE – HOME SCREEN**



**DUAL BELT – MODEL FR69B
READY MODE – HOME SCREEN**

The word "READY" in green is displayed at the top of the screen to let the user know that the broiler has reached temperature set point and is now ready for cooking.

The screen also shows the BROILER window(s) associated with the BROILER conveyor belt(s).

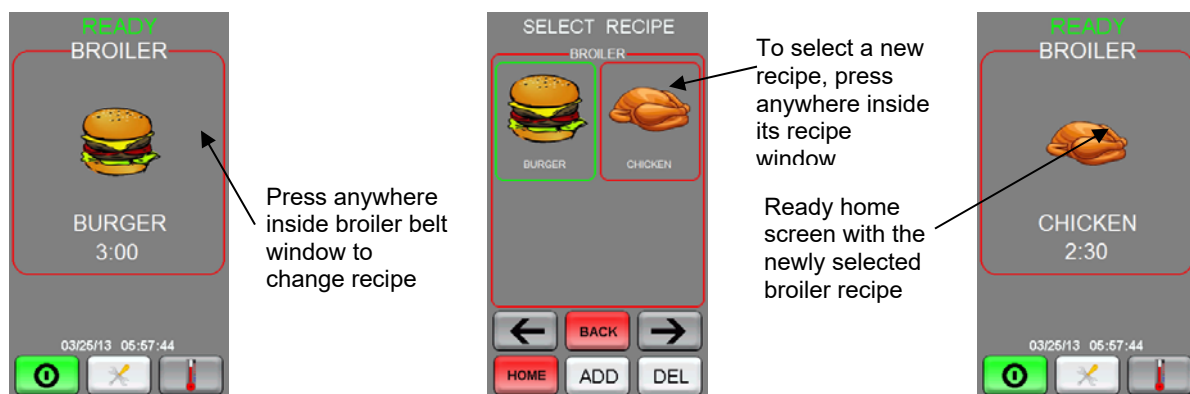


Broiler Window:

Each conveyor belt in the unit has its associated BROILER window.

The BROILER window(s) shows the active recipe, a representative food icon, the recipe name and the recipe cook time. Up to twelve different recipes can be programmed for the broiler belt. See **MENU MANAGEMENT** page 15-17 for more information about adding, modifying or deleting recipes.

To change the broiler recipe while in ready mode:



1. Press anywhere inside the BROILER belt window. The select recipe window will show up. Up to four different recipes can be shown on the first page. If more than four recipes are available for the

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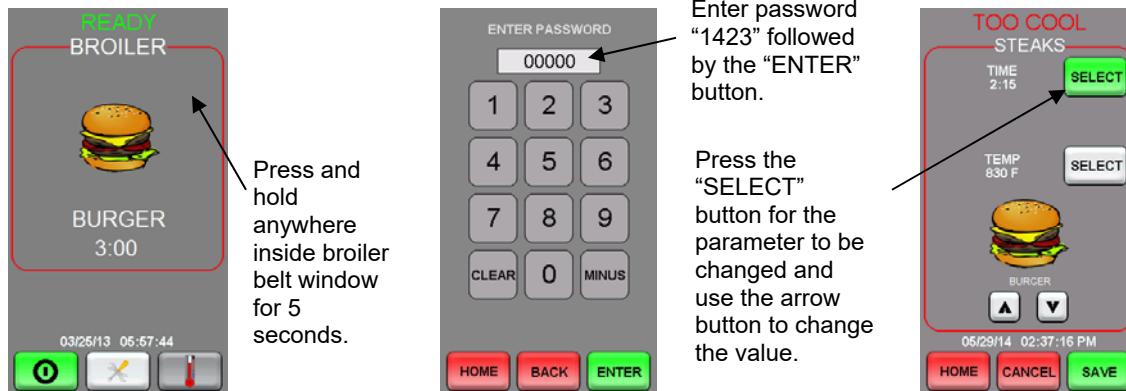
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selected belt, use the arrow buttons to navigate between the different recipe pages. Note that the arrow buttons will be grayed out if no other pages are available.


2. Once the desired recipe is found, press anywhere inside its window. The READY mode home screen will then show up with the newly selected recipe for that belt.
3. To cancel, press the back or the home button to return to the READY mode home page.

To modify a broiler belt recipe cook time or temperature set point while in ready mode:



1. Press and hold anywhere inside the broiler belt window for five seconds. The enter password screen will show up.
2. Enter password “1423” followed by the “ENTER” button and the modify screen will show up.
3. Press the “SELECT” button associated with the parameter to be change and use the arrow buttons to change the value.
4. To save new recipe settings and return to previous mode, press the “SAVE” button
5. To cancel, press the back or the home button to return to the READY mode home page.

To turn the broiler off:

Press the power button  for 2 seconds. The broiler will then go to cool down mode for ten minutes before going to the off mode.



Tools Button:

A press of the tools button will bring the user to the first page of the available tools. Note that while the broiler is in READY mode, only the first page of the tools is available. See the **TOOLS** section pages 10-18 for more details.

COOLING DOWN MODE

Once the broiler is turned off using the power button  from the PREHEATING mode home screen or the READY mode home screen, the broiler will go to COOL down mode.

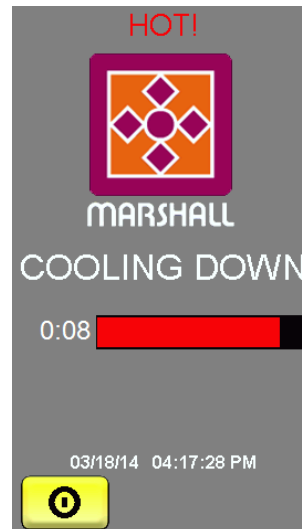
During the COOLING DOWN mode, all burners are turned off but the conveyors are running at different speeds to prevent grease bonding of the conveyor shafts. The word “HOT” is displayed at the top of the

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screen to remind the user that the broiler is still hot even though the burners are off. The COOLING DOWN mode screen is shown below.



COOLING DOWN MODE SCREEN



The cool down timer shows the remaining cool down time in minutes while the timer bar gives the user a quick reference of the remaining time versus total time. Once the cool down timer has elapsed, the broiler will go to the OFF mode.



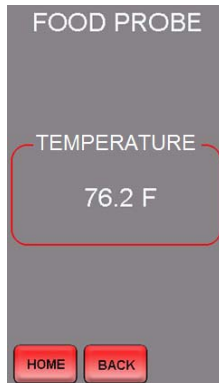
In this mode, the power button is yellow indicating that the broiler can be turned back on by pressing on the power button for 2 seconds. The broiler will then go to the PREHEATING mode.


FOOD PROBE (OPTIONAL)

The food probe button is only useable while the broiler is in READY mode. It can be used for two purposes:

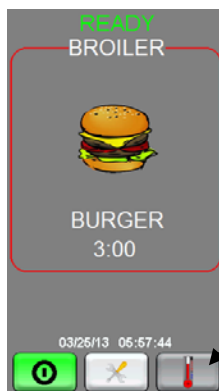
- **To take live temperature measurements of a food product.** This is useful to verify that a food product is cooked properly.
- **To initiate a log for a recipe.** This functionality allows the manager to record temperature measurements of the different recipes that can later be retrieved using a USB flash drive.

To take live temperature measurements of a food product:

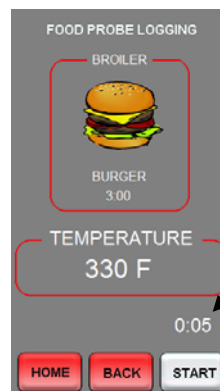


1. Connect the food probe into the food probe receptacle on the unit.
2. Press the food probe button  to go to the FOOD PROBE screen.
3. Insert the food probe into a food product to take a measurement.
4. To cancel or go back to READY mode home screen, press the home or back button.

To initiate a log for a recipe:




Press and hold for 3 seconds the food probe button



Equalization timer

Press the start button

1. Connect the food probe into the unit.
2. For models with more than one belt, select the belt associated to the recipe to be logged.
3. Press and hold the food probe button  for 3 seconds. The FOOD PROBE LOGGING screen will come up showing the active recipe (representative icon, recipe name and cook time) as well as a live temperature reading window below it.
4. Insert the food probe into the food product according to sanitary codes and normal restaurant procedures.
5. Nothing is being logged yet. The user must wait until a certain temperature is reached which depends on what is being sampled, as well as specific restaurant procedures.
6. When temperature reaches a specific point (known to the user), the user presses the start button. The user must keep the food probe into the food sample at this point.
7. Once the equalization timer has elapsed it will beep four times, the word temperature will be temporary replaced by "FINAL TEMP" and the final temperature reading will be displayed to let the user know that a temperature measurement has been logged.
8. Repeat steps 3 to 7 to log more measurements of the same recipe.
9. To go back to the READY mode home screen, press the home or the back button.

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The following is logged each time a sample is taken:

- Date (MM/DD/YY)
- Time (HH:MM:SS)
- Recipe name
- Recipe set point (degree F or C)
- Final temperature reading (degree F or C)
- Recipe cook time (MM:SS)

See the **TOOLS** section pages 10-12 for more information on how to retrieve food probe logs using a USB flash drive.

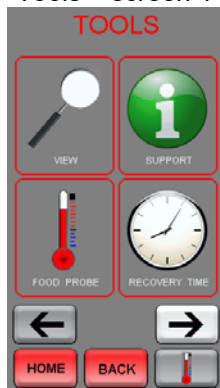
TOOLS



The tools button is only available from the OFF mode home screen, the PREHEATING mode home screen and the READY mode home screen.

There are two screens with four tools each for a total of eight available tools. **Note that only the first tool screen is available from the PREHEATING and the READY mode.** The two TOOLS screens are shown below. Use the arrow to navigate between the two pages.

Tools – screen 1



Tools – screen 2



VIEW TOOL:




The VIEW tool allows the user to monitor basic information of the active recipe of the broiler belt. Simply press the VIEW tool button to go to the VIEW screen. The BROILER belt window will have the names of the active recipe, the temperature set points of the recipe, the current temperatures of the cooking chamber and the recipe cook time. Press the back button to return to the TOOLS screen or the home button to go to the OFF, PREHEATING, or READY mode home screen.

SUPPORT TOOL:



Press the SUPPORT tool button to get contact information about Marshall Air Systems, Inc., the model and serial number of the broiler or download PDF files of guides and manuals for the broiler.

To download pdf files (only possible while the broiler is in OFF mode):

1. Unscrew USB port cover.
2. Insert USB flash drive in USB port located below touch screen control.
3. From the support screen, press the download PDF files button . Wait until the screen displays the word “SUCCESS”. An error message will be displayed if the download could not be completed.

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4. Remove USB flash drive from USB port and put cover back on. Use the back button to go back to the SUPPORT screen or the home button to go back to the OFF mode home screen.
5. The PDF files can now be transfer to a computer.



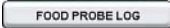

FOOD PROBE TOOL:

The FOOD PROBE tool allows the user to do two things:

- Retrieve food probe logs using a USB flash drive.
- Recalibrate the food probe using the factory defaults or by using ice and boiling water.

To select one of the two options, first press on the FOOD PROBE tool button . The screen will display the two options.

To retrieve food probe logs using a USB flash drive:

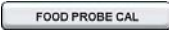

1. Press the food probe log button . This will take the user to the food probe log screen showing a list of the last eight food probe logs took using the steps describe previously in the "FOOD PROBE" section.
2. Remove USB port cover and insert the USB flash drive into the USB port (located below touch screen control).
3. Press the USB button  to start downloading. Wait until the screen displays the word "SUCCESS". An error message will be displayed if the download could not be completed.
4. Remove USB flash drive from USB port and put cover back on. Use the back button to go back to the SUPPORT screen or the home button to go back to the OFF, PREHEATING, or READY mode home screen.
5. The TXT file can now be transferred to a computer.

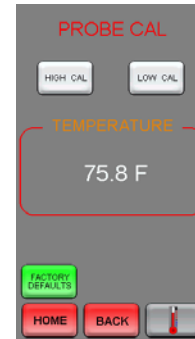
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To recalibrate the food probe:



From the FOOD PROBE tool screen press the food probe calibration button . The keypad screen will come up asking for a password. Enter password “1423” using the keypad followed by the enter button . The food probe calibration screen will then be displayed.



Using the factory defaults:

1. Press the factory defaults button .
2. The controller will automatically be recalibrated using the factory defaults and the FOOD PROBE tool screen will come back up.

Using ice and boiling water:

1. Connect the food probe to the broiler.
2. Using precaution, get a glass of ice water and a small pot of boiling water ready and put them close enough to the broiler so it can be reached with the food probe.
3. Insert and stir the food probe into the glass of ice water and wait until temperature stabilizes (around 0-degree C or 32-degree F) and then press the low calibration button .
4. Next, insert the food probe into the pot of boiling water and wait until the temperature stabilize (around 100-degree C or 212-degree F) and then press the high calibration button . The food probe is now recalibrated.

To cancel recalibration, press the back button to return to the FOOD PROBE tool screen or the home button to go back to the OFF, PREHEATING, or READY mode home page.

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RECOVERY TIME TOOL:



The recovery time is defined as the amount of time it takes for the broiler to go from 93°C (200°F) up to 10°C (50°F) below set point. This data is useful for service and HACCP purposes. To access the

RECOVERY TIME screen, simply press the RECOVERY TIME tool button . The screen will show a list of recovery times with the date and time that they were recorded.

To download the list to a USB flash drive:




1. Unscrew USB port cover and insert an USB flash drive into the USB port of the broiler (located below touch screen control).
2. Press the USB button  and wait until the screen displays the word “SUCCESS”. An error message will be displayed if the download could not be completed.
3. Remove USB flash drive from USB port and put cover back on. Use the back button to go back to the tools screen or the home button to go back to the OFF, PREHEATING or READY mode home screen.
4. The TXT file can now be transferred to a computer.

To exit recovery time screen, press the back button to go back to the previous page or the home button to go back to the OFF, PREHEATING, READY or COOLING DOWN mode home screen.





SETTINGS TOOL (ONLY ACCESSIBLE WHILE IN OFF MODE):

The SETTINGS tool is to allow qualifying service agencies to perform testing on the unit as well as to allow the store personnel to make general setting changes to the broiler. Once the SETTINGS tool button is pressed, the SETTINGS screen will come up showing three options:

- Hardware test (password restricted for servicing only) 
- System configuration (password restricted for servicing only) 
- General configuration 

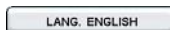
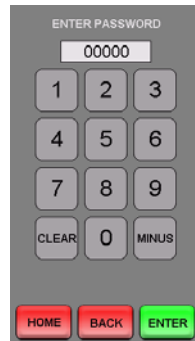
Only the general configuration option is accessible to the store personnel.

To change the general settings of the broiler, press the general configuration button . The keypad screen will come up asking for a password. Enter password “1423” using the keypad followed by

pressing the enter button . This will bring up the general configuration screen 1. To navigate between general configuration screen 1 and screen 2, use the arrow buttons.

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LANGUAGE

Press this button to toggle between the different languages (if available).



TEMPERATURE UNITS

Press to toggle between setting the broiler for degree Fahrenheit (F) or degree Celsius (C).



TIME FORMAT

Press to toggle between standard or military time formats.



TIME

Press to use keypad to set the time. The time format is HH/MM.



DATE

Press to use keypad to set the date. The date format is MM/DD/YY.



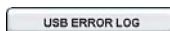
MAINTENANCE MESSAGE REMINDERS

This feature allows the user to set up multiple recurrent maintenance message reminders. Press on the button to switch to the MAINT ITEM screen.



To set up a maintenance message reminder:

1. Press the item name button to enter the name of the maintenance message using the keypad.
2. Press the interval days' button to enter the reminder interval period in days using the keypad.
3. To activate the maintenance message reminder, press the start button. Note that the maintenance message reminder can be started at a later time.
4. Press the save button to save entries and go back to the previous page.
5. To cancel, press the back button to return to the previous page or the home button to return to the OFF mode home screen



USB ERROR LOG

This feature allows the user to download an error report to a USB flash drive. To do so, unscrew USB port cover, insert USB flash drive into the USB port located in left side of the control cabinet and press the USB error log button. Wait until the screen displays the word "SUCCESS". An error message will be displayed if the download could not be completed.

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Remove USB flash drive from USB port and put cover back on. Use the back button to go back to the previous page or the home button to go back to the OFF mode home screen.

The TXT file can now be transferred to a computer.

I/O FIRMWARE UPDATE

To download an I/O firmware update, unscrew USB port cover, insert USB flash drive with a valid file format into USB port located in left side of the control cabinet and press the I/O firmware update button. This will take the user to the I/O firmware upload screen.



To start the download, press the yes button to start the download. The download process will take about twenty seconds after which the controller will go back to the previous screen.

To cancel the download, press the no or back or home button. The no and back button will take the user back to the previous screen while the home button will take the user back to the OFF mode home screen.

FIRMWARE VERSION NUMBERS

Press this button to get information about the firmware versions. This is useful information for the manufacturer.

EXPORT RECIPES

This feature allows the user to copy all the different recipes on the broiler to a USB flash drive. The user can then use the flash drive to import those recipes in other units or to edit them using the Menu Editor application.

To copy all the recipes from a broiler to a USB flash drive, simply remove the USB port cover and insert the USB flash drive into the USB port. Press the EXPORT RECIPES button and wait until the screen shows "SUCCESS". Press the BACK button to go back to the previous screen or the HOME button to go directly to the OFF mode home screen.

A "recipe.menu" file has been created into the root directory of the USB flash drive and can be used to import recipes into other unit or to edit those recipes via the Menu Editor application


IMPORT RECIPES

Use this feature to upload recipes into a unit. Simply remove the USB port cover and insert the USB flash drive with a valid recipes file (recipe.mnu) into the USB port. Press the IMPORT RECIPES button and wait until the screen shows "SUCCESS". All the new recipes settings are now available in the broiler. Press the BACK button to go back to the previous screen or the HOME button to go directly to the OFF mode home screen.



MENU MANAGEMENT TOOL (ONLY ACCESSIBLE WHILE IN OFF MODE):


This is where the user can add, modify or delete recipes. Up to twelve different recipes can be programmed.

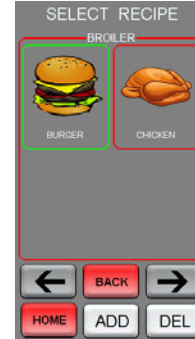
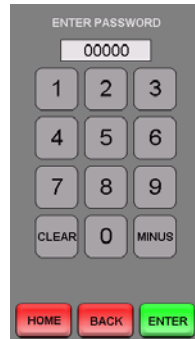
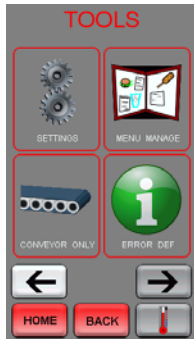
To access the MENU MANAGEMENT screen, press the menu management button . The keypad screen will come up asking for a password. Enter password "1423" using the keypad followed by the

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


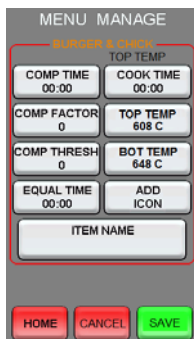
enter button . The MENU MANAGEMENT screen will then come. Press on the broiler belt window to add, modify or delete recipes. The add/modify/delete screen will come up. If there are more than four recipes available for that belt, use the arrow buttons to switch pages.




To add a recipe:


Press the add button . This will bring up the add/modify a recipe screen.


 Press to change the recipe cook time using the keypad. The cook time is defined as how much time it takes for the product to travel from the entrance of the cooking chamber to the exit of the cooking chamber. **Note that the cook time needs to be set to a different value than 00:00 in order to be able to save the recipe.**





 Press to change the recipe top temperature set point using the keypad.


 Press to change the recipe bottom temperature set point using the keypad.


 Press to select a recipe icon. This will bring the select a recipe screen. Using the previous and next buttons, navigate to the desired food icon and simply press on it to select it.

 Press to change the compensation time using the keypad. See **TIME COMPENSATION** page 18 for more details.

 Press to change the compensation factor using the keypad. See **TIME COMPENSATION** page 18 for more details.

 Press to change the compensation threshold using the keypad. See **TIME COMPENSATION** page 18 for more details.

 Press to change the equalization time using the keypad. The equalization time is used with the food probe log functionality. This defines how long the controller waits after the user presses the start button on the FOOD PROBE LOGGING screen (see FOOD PROBE TOOL section page 10-12) before logging the final temperature. This time is mandated by various local sanitation codes and specific restaurant procedures.

 Press to enter a recipe name using the keypad.

Once all the parameters have been set, press the save button to save and return to the add/modify/delete recipe screen.

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To cancel, press the cancel button to go back to the previous screen or the home button to go back to the off mode home screen.


To modify a recipe:

From the add/modify/delete recipe screen, use the arrow buttons to navigate to the desired recipe and select the recipe by pressing on the recipe window. Once selected, the recipe will be highlighted and the

add button will become the modify button . Press on the modify button and this will bring up the add/modify a recipe screen described above. Follow the same instructions described in the add a recipe section to modify the recipe.

Once all the parameters have been set, press the save button to save and return to the add/modify/delete recipe screen. To cancel, press the cancel button to go back to the previous screen or the home button to go back to the OFF mode home screen.

To delete a recipe:

From the add/modify/delete recipe screen, use the arrow buttons to navigate to the desired recipe and select the recipe by pressing on the recipe window. Once selected, the recipe will be highlighted. Simply press the delete button  to delete the selected recipe.

CONVEYOR ONLY TOOL (ONLY ACCESSIBLE WHILE IN OFF MODE):






The CONVEYOR ONLY tool allows the user to run the conveyors without heating. This is useful for servicing purposes.


Press the CONVEYOR ONLY button  to go to the CONVEYOR ONLY screen.



The broiler conveyor(s) will automatically start running at 1:00 cook time.

To change the conveyor speed, press and hold the up  or down  arrow buttons until desired speed is reached.

To stop the conveyor, press the conveyor stop button .


To start the conveyor, press the conveyor start button .

To exit CONVEYOR ONLY mode, press the back button to return to the tools screen or the home button to return to the OFF mode home screen.



ERROR DEFINITION TOOL (ONLY ACCESSIBLE WHILE IN OFF MODE):

This tool gives the user a description of all the possible error messages displayed during the broiler operation.

Press on the error definition button  to display the list of possible errors. Use the arrow buttons to navigate to the desired error definition and simply press on the error definition to display the description.

Use the back button to go back to the previous page or the home button to go back to the OFF mode home screen.

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TIME COMPENSATION

This feature allows the unit to compensate for medium/long term temperature variations due to quantity and/or type of food being fed into the broiler.

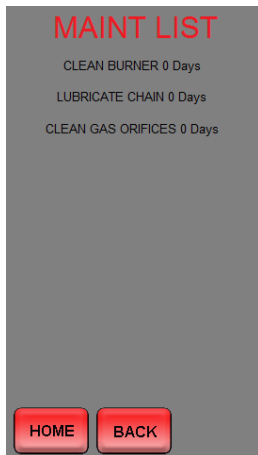
Basically, if the temperature of the cooking chamber remains for the **compensation time** above (or below) the set point plus (or minus) the **compensation threshold**, then the unit will automatically subtract (or add) cooking time (defined as a percentage of the current recipe time, **compensation factor**) to the current recipe. This will not change the programmed time, but will shorten (or lengthen) the recipe until the temperatures return to normal.

Each recipe can have its own compensation parameters, independent of all other recipes.

MAINTENANCE MESSAGES

For Serial Numbers Before 05292

If one or more maintenance message reminder timers have elapsed and the broiler is transitioning from cool down mode to off mode, the maintenance items screen will come up and a beeping will be heard.



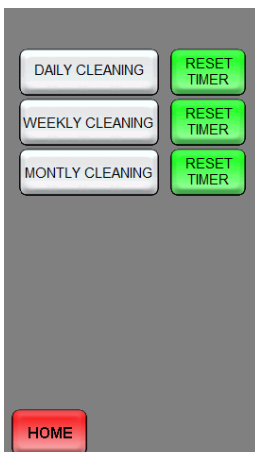
Press the back button or the home button to acknowledge. The beeping will stop and the off mode home screen will come up.

Once the user is done with one of the items from the maintenance list, the timer for that item can be reactivated at any time while in off mode following the instructions from TOOLS – MAINTENANCE MESSAGE REMINDERS section page .

Note that the maintenance alert screen will come up every time that the broiler goes from cool down mode to off mode until all items from the list have been reactivated.

For Serial Numbers After 05291

If one or more maintenance reminder timers have elapsed and the broiler is transitioning from COOLING DOWN mode to the OFF mode, the maintenance items screen will come up and a beeping will be heard to remind the users to perform the listed maintenance items.



To reset a maintenance items:

1. Once a maintenance item has been performed, press the associated RESET TIMER button. The enter password screen will come up.
2. Enter password "1000" followed by the ENTER button to reset its timer. The maintenance items screen will come back up unless no items are left. In this case the touchscreen control will go back to OFF mode home screen.
3. Repeat step 1 and 2 for any other maintenance items left.
4. To exit maintenance items screen and return to the off mode home screen, press the HOME button.

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EMERGENCY STOP SWITCH

An emergency stop switch is available on the front of the unit. This toggle switch is for stopping the conveyors immediately in case of a conveyor jam or other problem requiring the unit to shut down. **Do not use the switch for normal shut downs at the end of the day.** Use it only if the conveyor jams or you need to stop the broiler quickly. This switch stops the conveyors and turns off the burners and turns off power to the control panels. When you turn the “Emergency Shut Off Switch” back on, the control will cycle through and initialize and then go to the OFF mode. From here you can turn on the broiler as normal.

IV. SCHEDULED MAINTENANCE

CLEANING DURING OPERATION

GREASE AND ASH REMOVAL FROM GREASE TRAY

Use caution when removing the Grease Tray as it will be extremely HOT. DO NOT clean the Grease Tray in cold water, as cold water will warp the hot tray. To avoid cooling the broiler down during cleaning, replace the used Grease Tray with a clean one immediately after removing the used one.

DAILY CLEANING PROCEDURES



CAUTION: Do not touch the broiler section immediately after broiler shut-down. The temperature inside enclosures is in excess of 260°C (500°F), which eliminates the need to clean any parts inside the enclosures for sanitary purposes. Any grease that may build up on the exterior of the enclosures should be cleaned off with a damp cloth and a minimum amount of detergent. **Never use water on the enclosure. Disconnect the power supply to the broiler before cleaning or servicing.**



CAUTION: UNDER NO CIRCUMSTANCES SHOULD OVEN CLEANER BE USED ON THIS BROILER. OVEN CLEANER WILL CREATE CAUSTIC FUMES THAT CAUSES ELECTRICAL COMPONENT DAMAGE, AND WILL CAUSE MANY OTHER PROBLEMS IF USED TO CLEAN THIS BROILER.



CAUTION: DO NOT ALLOW WATER TO CONTACT THE (2) COOLING FANS. DOING SO MAY CAUSE THE BROILER TO TRIP THE GROUND FAULT RECEPTACLES AND NOT OPERATE. PLEASE COVER THE FANS WITH PLASTIC OR OTHER TO PREVENT WATER FROM CONTACTING THE FANS.



CAUTION: KEEP THE BROILER AREA FREE AND CLEAR FROM COMBUSTIBLES.

1. Allow broiler to operate until the control goes from HOT to OFF after cooking last patty to burn off excess grease on broiler components. (This applies every time a meat chain is turned off -- regardless of what time of day meat chain is shut down -- and regardless of how few patties were broiled in the last 30 minutes, last hour, etc.) This will clean some parts of the cooking chamber. Failure to perform this procedure daily will result in poor cooking times.
2. Turn off broiler, wait 30 minutes and disconnect electricity.
3. Remove all exterior panels except those which are attached with screws. Be careful not to touch any hot internal broiler components.
4. Remove the top heat shield (Figure 2) located above the meat conveyor and clean with wire brush.

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5. The tube bundle should be removed and wire brushed. Further cleaning is not necessary, however, make sure carbon deposits are scraped from between the tubes with tool such as a screwdriver. * NOT ON DK3-126BCD*
6. Additional cleaning should exhibit good housecleaning and entail a general wiping of all exterior surfaces.
7. Remove the following items and wash with soapy water when they are cool enough to touch with a bare hand.

DK8 SERIES:

*	FRONT TUNNEL COVER	Figure 2, Item 3
	GREASE TRAY	Figure 2, Item 9, 10
*	PRODUCT PAN TRAY	Figure 2, Item 6
*	PRODUCT SLIDE	Figure 2, Item 7
*	WIRE RACK	Figure 2, Item 12
	MEAT STRIPPER	Figure 3, Item 5
*	TRANSFER BELT LOADER	Figure 2
*	AUTOLOADER ARM COVER	Figure 2, Item 2
* NOTE: These items may be removed during the cooling period		

DK3 SERIES:

*	PRODUCT SLIDE	Figure 2B, Item 1
*	CRUMB TRAY	Figure 2B, Item 2

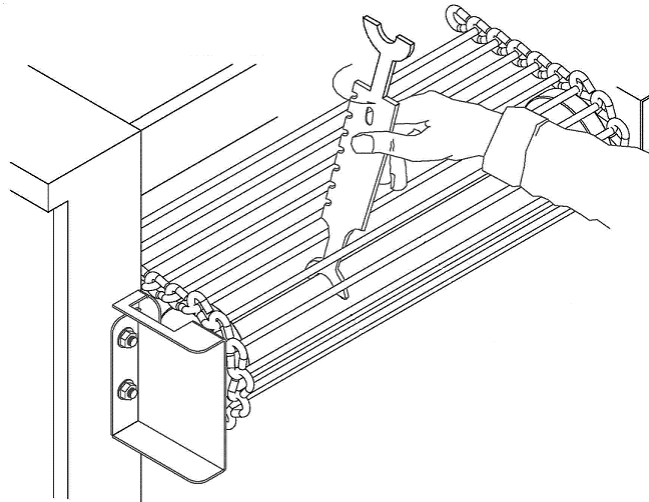
8. Using the conveyor only tool on the control which turns the conveyor **ON** and leaves the heat **OFF** (see Conveyor Only Tool for more details), brush the broiler conveyor and, as it cools, wipe with damp cloth.
9. Scrape deposits from the axles with the axle scraping tool, furnished with each machine as shown below. ***THIS IS IMPORTANT TO PREVENT GREASE FIRES AT REAR OF THE BROILER**
10. Remove grease and meat residue from any part of remaining broiler structure where visible. Use a damp cloth with detergent and a putty knife for best results.
11. After cleaning all removable parts as noted, allow to dry before reassembling.



CAUTION: KEEP THE BROILER AREA FREE AND CLEAR FROM COMBUSTIBLES.

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Axle Scraper Part Number 101363

The axle scraper provided with the broiler is a handy tool for cleaning the dirt and grime off of the axles. To insert, place end of scraper in between conveyor and turn scraper as shown in the illustration. Scrape the axle back and forth.

MONTHLY CLEANING PROCEDURES

1. Perform Daily Cleaning Procedures.
2. Remove the broiler conveyor chain from the machine and steam clean or soak in detergent solution. The conveyor is removed by taking the conveyor apart at the cut links. When the conveyor is removed, check all heating elements and replace elements showing extreme corrosion. Check bearings for excessive wear and order replacements where needed. Make certain conveyors are reinstalled going in the correct direction. **PLACING CHAIN ON BACKWARDS WILL CAUSE SEVERE BINDING PROBLEMS.**



CAUTION: KEEP THE BROILER AREA FREE AND CLEAR FROM COMBUSTIBLES.

QUARTERLY CLEANING PROCEDURES & PREVENTIVE MAINTENANCE

1. Perform daily and monthly cleaning procedures.
2. If required, remove conveyor and soak in hot soapy water overnight. To remove conveyor, lift front axle up to produce slack in the conveyor and separate conveyor at the cut link. Using the conveyor only button may be required to locate the cut link. If there is not a cut link, open a link with chain pliers (part #500033) to separate conveyor. When replacing the conveyor, make certain the conveyor is installed properly. Make reference to the orientation of the conveyor links and the conveyor direction before reassembly. See illustration on preceding page.



PLACING CONVEYOR ON BACKWARDS WILL CAUSE SEVERE BINDING PROBLEMS.
CLOSE all open links with pliers to match other links.

3. Lubricate the roller (drive) chain with a few drops of any grade motor or machine oil.
4. Remove and inspect all motor brushes and replace if less than 1/4" is left.

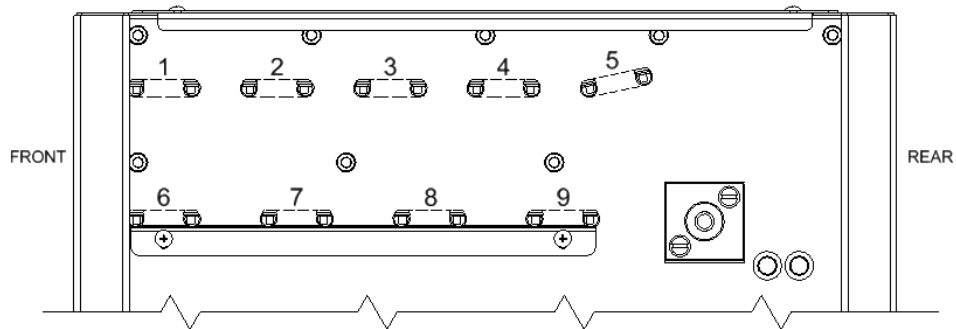
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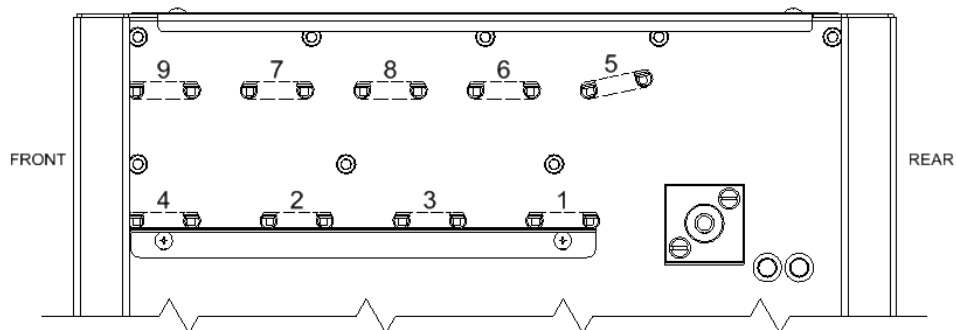


5. **CAUTION: DISCONNECT POWER BEFORE OPENING PANEL.** Retighten the screw lugs on the main power wires at the main terminal block inside the control box. Check that the other electrical connections are still tight.
6. **INVENTORY THE SPARE PARTS KIT AND ORDER MISSING PARTS AS NEEDED. KEEP A COMPLETE SET OF PARTS ON HAND AT ALL TIMES.**

ANNUAL RECOMMENDED MAINTENANCE DK8 SERIES



TO EXTEND THE LIFE OF THE ELEMENTS ROTATE THEIR POSITION FROM TOP TO BOTTOM AND FRONT TO REAR AS INDICATED BY THE NUMBERED POSITIONS IN THE TOP DIAGRAM MOVED TO THE NUMBERED POSITIONS IN THE BOTTOM DIAGRAM.

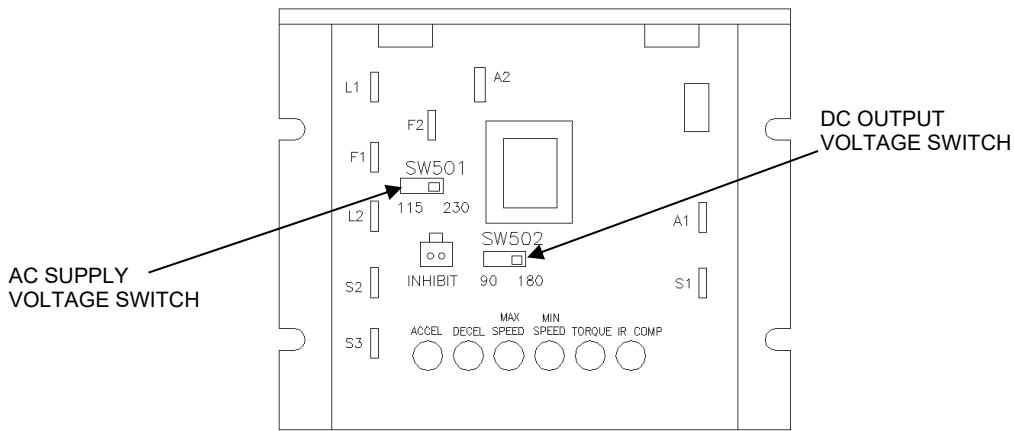


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V. MOTOR SPEED BOARDS



It is necessary when installing replacement circuit boards, to check the settings of the AC input switches.

1. Check the product schematic for the correct input voltage (115, 208 or 240).
2. Set AC input switch SW501 to the correct position. If the schematic calls for an input voltage of 115, set switch SW501 to 115. If the schematic call for an input voltage of 208-240, set switch SW501 to 230.

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VI. TROUBLE SHOOTING

This section contains a list of possible problems with your Autobroil. By locating the problem in this section, you may be able to make a quick repair. **ALL ELECTRICAL TROUBLE SHOOTING INVOLVING ACCESS INTO THE MOTORS OR ELECTRICAL ENCLOSURES MUST BE PERFORMED BY A QUALIFIED ELECTRICIAN.**

*** INSTRUCTIONS MARKED WITH ASTERISKS SHOULD BE PERFORMED BY AUTHORIZED SERVICE PERSONNEL.**

PROBLEM	POSSIBLE CAUSE	SOLUTION
1. MACHINE HAS POWER BUT ELEMENTS ARE OUT.	A. Check to make sure that broiler is turned on and that the correct voltage is coming out of switch (See Electrical Schematic) B. Check the power is passing through the solid state relays. C. Check wiring to individual elements D. Check fuses to each element. E. Check elements	A. Turn broiler on. B. Replace bad relay(s). C. Tighten wires to element connections. D. Replace fuses. E. Replace elements
2. CONVEYOR CHAIN WILL NOT MOVE.	A. Check for object caught in conveyor, causing a jam. *B. Check 1.5-amp speed board fuse (Refer to Wire Map). *C. Check 10-amp control fuse (Refer to Wire Map). D. Check to see if motor shaft is moving. *E. Check switch to make sure power is flowing through it. *F. Connect motor control leads to an operating motor speed control board.	A. Remove object. B. Replace if blown and turn broiler off and on. C. Replace if blown D. Sprocket needs to be tightened. E. Replace switch. F. If motor runs, replace motor control board. If motor still does not run, replace motor.
3. CONVEYOR RUNS BUT SPEED IS CONSTANT	*A. There are five parts to the motor system. They are the motor, the circuit board, the rotary speed control and the fuse mounted on the side of the control cabinet. The most likely problem would be a blown fuse.	A. Using spare parts, replace one part at a time until the trouble spot is identified.

INSTRUCTIONS MARKED WITH AN ASTERISK (*) SHOULD BE PERFORMED BY AUTHORIZED SERVICE PERSONNEL

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MODEL FR15B FR69B 126B AUTOBROIL™ WITH TOUCHSCREEN CONTROL



PROBLEM	POSSIBLE CAUSE	SOLUTION
<p>4. REPEATED MECHANICAL BINDING.</p>	<p>A. Check to see that chain is not on backward</p> <p>B. Inspect chain closely for bent or warped links that may be snagging and causing a binding condition. Also check that the chain links are not climbing out of the sprockets as the conveyor rotates.</p> <p>C. Make sure the axle assembly is clean and free of grease and food residue to allow smooth movement of the conveyor.</p> <p>D. Check the axle assembly to make certain all set collars, bearings, etc. is properly positioned and secure.</p> <p>E. Disassemble conveyor axle assembly and check condition of bushings and bearings for excessive wear.</p> <p>F. Visually inspect the motor drive chain assembly for smooth rotation of chain.</p> <p>G. Make sure conveyor is not catching on meat stripper. See Figure 3.</p>	<p>A. See proper chain installation on Figure 5.</p> <p>B. Straighten or replace bad links. Season new links with cloth saturated with shortening before broiler reaches full operating temperature.</p> <p>C. Clean axle. See Figure 5.</p> <p>D. Reposition and secure as needed.</p> <p>E. Replace if worn or damaged.</p> <p>F. Make certain there are no binding or worn components</p> <p>G. Straighten bent stripper.</p>
<p>5. MEAT DOES NOT COOK COMPLETELY.</p>	<p>A. Check that tube bundles are being cleaned in accordance with Item 5 in Section IV.</p> <p>B. Check to make sure the heat shield is installed (Figure 2)</p> <p>C. Check to make sure all elements are working. If not, check fuses in the control cabinet that protects the elements.</p> <p>D. Check the speed of the conveyor.</p> <p>E. Check refrigeration of meat. Holding temperature of meat may be lower than 0°F (-18°C)</p> <p>F. Check for excessive exhaust by momentarily turning exhaust fan off.</p> <p>G. Check setting on temperature controller</p>	<p>A. Clean tube bundles with wire brush, screwdriver or tube bundle scraper.</p> <p>B. Install heat shield.</p> <p>C. Replace fuses and/or heating elements.</p> <p>D. Adjust speed.</p> <p>E. Adjust product storage temperature.</p> <p>F. Not applicable.</p> <p>G. Adjust temperature</p>

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PROBLEM	POSSIBLE CAUSE	SOLUTION
<p>6. CANNOT MAINTAIN CONSISTENT TEMPERATURE DURING COOKING.</p>	<p>A. Check that tube bundles are being cleaned in accordance with Item 5 in Section IV.</p> <p>B. Check store power supply for large voltage variation. A 5% swing in voltage will require more than a 5% change in speed to counteract.</p> <p>C. Meat of different temperatures is being used. (Frozen vs partially thawed.)</p> <p>D. Check for excessive exhaust by momentarily turning off exhaust fan.</p> <p>E. Check to make sure the heat shield is installed (Figure 2)</p> <p>F. Check to make sure all elements are working. If not, check fuses in the control cabinet that protects the elements.</p>	<p>A. Clean tube bundles with wire brush, screwdriver or tube bundle scraper.</p> <p>B. Not applicable.</p> <p>C. Adjust product storage temperature.</p> <p>D. Replace bad or damaged exhaust fan.</p> <p>E. Install heat shield.</p> <p>F. Replace fuses and/or heating elements.</p>
<p>7. MEAT OVERCOOKED ON OUTSIDE AND UNDERCOOKED ON INSIDE</p>	<p>A. Check refrigeration of meat. Holding temperature of meat may be lower than 0°F (-18°C).</p> <p>B. Check that tube bundles are being cleaned in accordance with Item 5 in Section IV.</p>	<p>A. Adjust product storage temperature.</p> <p>B. Clean tube bundles with wire brush, screwdriver or tube bundle scraper.</p>
<p>8. MEAT NOT SLIDING INTO HAMBURGER CATCH AREA.</p>	<p>A. Meat stripper (Figure 3) needs cleaning.</p> <p>B. Meat stripper needs adjustment.</p> <p>C. Wire grate missing.</p>	<p>A. Clean meat stripper.</p> <p>B. Adjust meat stripper.</p> <p>C. Install wire grate.</p>

INSTRUCTIONS MARKED WITH AN ASTERISK (*) SHOULD BE PERFORMED BY AUTHORIZED SERVICE PERSONNEL

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The following Error Messages are associated with the touch screen controls:

PROBLEM	POSSIBLE CAUSE	SOLUTION
<p>9. "TOO HOT" ERROR MESSAGE</p> <p>The broiler and/or toaster chamber temperature has risen above the acceptable program to cook reliably.</p>	<p>A. Bad solid state relay.</p> <p>B. Bad I/O board</p>	<p>A. Replace proper solid state relay</p> <p>B. Replace I/O board</p>
<p>10. "TOO COOL" ERROR MESSAGE</p> <p>The broiler and/or toaster chamber temperature has fallen below the acceptable program to cook reliably.</p>	<p>A. Hang on covers/parts not in place</p> <p>B. Failed element fuse</p> <p>C. Bad element</p> <p>D. Bad solid state relay</p> <p>E. Bad contactor</p> <p>F. Loose wire or connection</p>	<p>A. Install parts correctly</p> <p>B. Replace fuse</p> <p>C. Replace element</p> <p>D. Replace solid state relay</p> <p>E. Replace contactor</p> <p>F. Check wire connections</p>
<p>11. "CHAMBER TC1 ERROR" ERROR MESSAGE</p> <p>Chamber TC1 (electrical chamber - top) is not providing proper temperature.</p>	<p>A. Loose thermocouple</p> <p>B. Failed thermocouple</p>	<p>A. Fix wiring connection</p> <p>B. Replace thermocouple</p>
<p>12. "CHAMBER TC2 ERROR" ERROR MESSAGE</p> <p>Chamber TC2 (electric chamber – bottom) is not providing proper temperature.</p>	<p>A. Loose thermocouple</p> <p>B. Failed thermocouple</p>	<p>A. Fix wiring connection</p> <p>B. Replace thermocouple</p>
<p>13. "FOOD PROBE ERROR" ERROR MESSAGE</p> <p>The food probe is not providing proper temperature.</p>	<p>A. Food probe is not connected</p> <p>B. Failed food probe</p>	<p>A. Plug in food probe</p> <p>B. Replace food probe</p>
<p>14. "TACH # ERROR" ERROR MESSAGE</p> <p>Motor # is not providing proper feedback.</p>	<p>A. Check for object caught in conveyor causing a jam</p> <p>B. Check motor # .5amp fuse inside of the control cabinet</p> <p>C. Check to see if motor shaft is moving</p> <p>D. Check control circuit fuse</p> <p>E. Connect motor control leads to an operating motor speed control board.</p>	<p>A. Remove object</p> <p>B. Turn broiler off, replace fuse and turn broiler back on.</p> <p>C. Sprocket set screw needs to be tightened.</p> <p>D. Replace if blown</p> <p>E. If motor runs, replace motor control board. If motor still does not run, replace motor.</p>

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PROBLEM	POSSIBLE CAUSE	SOLUTION
15. "RECOVERY ERROR" ERROR MESSAGE The broiler did not reach temperature set points in a predictable time frame.	A. Pilot flame goes out B. Burner will not light at all C. Toaster will not get hot enough	A. See table problem 3 B. See table problem 4 C. See table problem 9
16. "EEPROM CORRUPT ERROR" ERROR MESSAGE Retrieving some stored parameters has failed.	A. No USB drive is connected B. USB drive is corrupted C. USB drive is full	A. Insert USB drive into USB port B. Insert new USB drive C. Remove files from USB drive and try again

VII. ASSEMBLY & DISASSEMBLY INSTRUCTIONS

- To Replace the Heating Elements:
 - Disconnect power to the broiler.
 - Remove right side cover to access elements.
 - Disconnect the wires to the element to be replaced.
 - Remove element lock by unscrewing the two screws. Note that the element lock for the top elements are located on the top left of the unit under the heat shield.
 - From the inside of the unit, pull the element out of the broiler through the slot in the side of the broiler.
 - Insert a new element. Make sure that it is well anchored in element hanger.
 - Reconnect wiring and install cover.
 - Connect power and test operation.
- When replacing the thermocouple which attaches controller, make certain it is inserted through side wall of machine into cooking chamber into elements with clip (See Figure 3).
- To properly set the clearance between the meat stripper and the conveyor chain, the machine must be HOT. Loosen the bolts holding the brackets to the sides of the unit and adjust their position until the top edge of the stripper is within 1/16" (2mm) of the hot conveyor. See Figure 3 and Figure 5.

WARNING: THIS APPLIANCE IS NOT CAPABLE OF BEING SAFELY PLACED INTO OPERATION DURING A POWER FAILURE AND NO ATTEMPT TO OPERATE IT SHOULD BE MADE.

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VIII. REPLACEMENT PARTS

When ordering parts, make sure to specify the machine model number and serial number as shown by the label attached to the right side cover.

WARNING: USE OF NON- MARSHALL APPROVED PARTS WILL VOID WARRANTY.

PART #	DESCRIPTION	QUANTITY PER UNIT	FIGURE
165681	Bearing Standoff	2	6, 6A
166380	Bearing Teflon	2	6, 6A
100977	Bearing, 1" Shaft Teflon Outer	1	6A
504307	Belt, Loader DK8-69DQ Only	1	2A
166370	Chute, Meat	1	2
504248	Catalyst (FR69B)	1	2A
168909	Catalyst Frame Asby (FR69B)	1	2A
141643	Circuit Board, Speed Control 230V (FR15B)	1	Schematic
141643	Circuit Board, Speed Control 230V (FR69B)	2	Schematic
500117	Collar, Set	1	6
140163	Collar, Set	1	6A
503820	Connector, Food Probe (Optional)	1	Schematic
504285	Control, I/O Board	1	Schematic
167720	Control, Touch Screen (DK8EP Only)	1	Schematic
168291	Control, Touch Screen (DK8-69DQ Only)	1	Schematic
169403	Control, Touch Screen (DK8-69INTLCE Only)	1	Schematic
172127	Control, Touch Screen (DK8INTLCE Only)	1	Schematic
173547	Control, Touch Screen (DK8-69ZXB)	1	Schematic
174566	Control, Touch Screen (DK8 Only)	1	Schematic
182595	Control, Touch Screen (DK8-69R440VCE Only)	1	Schematic
186004	Control, Touch Screen (DK3126BCD Only)	1	Schematic
167711	Cover, Front Tunnel Asby	1	2, 2A
500026	Conveyor Belt 15" ROD, 7 GA (Per Foot) (FR15B)	3.4 FT	N/A
500023	Conveyor Belt 6" (Per Foot) (FR69B, 126B)	3.4 FT	N/A
500024	Conveyor Belt 9" (Per Foot) (FR69B)	3.4 FT	N/A
500025	Conveyor Belt 12" (Per Foot) (126B)	3.4 FT	N/A
104679	Conveyor Cut Link 15" (Each) (FR15B)	1	N/A
155105	Conveyor Cut Link 6" (Each) (FR69B)	1	N/A
155104	Conveyor Cut Link 9" (Each) (FR69B)	1	N/A
504513	Cord (DK8EP Only)	1	Schematic
500158	Cord 10/4 SOOW (DK8-69DQ & DK8-69ZXB)	7 FT	Schematic
503504	Cord Intl (DK8-69INTLCE Only)	7 FT	Schematic
178965	Cord Asby 6/3 SOOW (DK3-126B)	7FT	Schematic
182597	Cord Asby 10/4 SOOW (DK8-69R440VCE Only)	7 FT	Schematic
169020	Cover, Front Tunnel (w/Optional Catalyst) (FR69B)	1	2A
167703	Cover, Motor	1	2, 2A

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MODEL FR15B FR69B 126B AUTOBROIL™ WITH TOUCHSCREEN CONTROL



PART #	DESCRIPTION	QUANTITY PER UNIT	FIGURE
185580	Cover, Motor	1	2B
183159	Crumb Tray	1	2B
165434	Diverter, Cooling Fan (DK8EP & DK8-69R440VCE)	1	2
500049	Element 915W 220V	7	3, 3A, Schematic
166458	Elements-915W @ 220V w/ T/C Clip*	2	3, 3A, Schematic
504719	Element, 915W 440V	7	3A, Schematic
181908	Element, 915W 440V w/ T-Couple Clip	1	3A, Schematic
504734	Element, 1325W 208V	4	3B, Schematic
183165	Element, 1325W 208V w/T-Couple Clip	2	3B, Schematic
167146	Fan 230V With Terminals	2	Schematic
501139	Fuse 0.5 Amp	Up to 2	Schematic
500061	Fuse 1.5 Amp	Up to 4	Schematic
504722	Fuse 2 Amp 600V (DK8-69R440VCE Only)	2	Schematic
503128	Fuse 5 Amp (CE Units Only, Except DK8-69R440VCE)	1	Schematic
504724	Fuse 6 Amp 600V (DK8-69R440VCE Only)	10	Schematic
502739	Fuse 10 Amp (Not on DK8-69R440VCE)	Up to 10	Schematic
502304	Fuse 15 Amp (Not on DK8-69R440VCE)	Up to 12	Schematic
504081	Fuse Block 2 Pole (Not on DK8-69R440VCE)	Up to 6	Schematic
500069	Fuse Block 2-Pole	Up to 3	Schematic
504723	Fuse Block 30A 600V (DK8-69R440VCE Only)	5	Schematic
500068	Fuse Holder Panel Mount (Not on DK8-69R440VCE)	2	Schematic
503099	Fuse Holder Panel Mount (DK8-69INTLCE Only)	1	Schematic
504721	Fuse Holder Panel Mount 30A 600V (DK8-69R440VCE Only)	2	Schematic
168900	Gate, Loader Asby	1	2A
165379	Grease Tray	1	2, 2A
500293	Ground Lug	1	Schematic
500083	Half Link (Roller Chain)	1	N/A
165424	Hanger, Meat Stripper LH Asby	1	3, 3A
165426	Hanger, Meat Stripper RH Asby	1	3, 3A
165369	Heat Shield Asby Top	1	2, 2A
168906	Heat Shield Asby (FR69B w/ Catalyst Only)	1	2A
168809	Idler, 1.405" OD x .755" ID	2	6A
168964	Insert, Pan Locator (DK8EP Only)	1	2
148549	Kit, Motor Brush	1	N/A
168046	Kit, Spare Parts FR15B (Single Belt)	1	N/A
168635	Kit, Spare Parts FR69B (Dual Belt, Except DK8-69R440VCE)	1	N/A
168590	Kit, Annual Preventative Maintenance FR15B (Single Belt)	1	N/A
159021	Loader Frame Asby	1	2A
500092	Master Link (Roller Chain)	1	N/A
166365	Meat Stripper (FR15B)	1	3
168812	Meat Stripper Asby (FR69B)	1	3A
500940	Motor (FR15B)	1	6, Schematic

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MODEL FR15B FR69B 126B AUTOBROIL™ WITH TOUCHSCREEN CONTROL



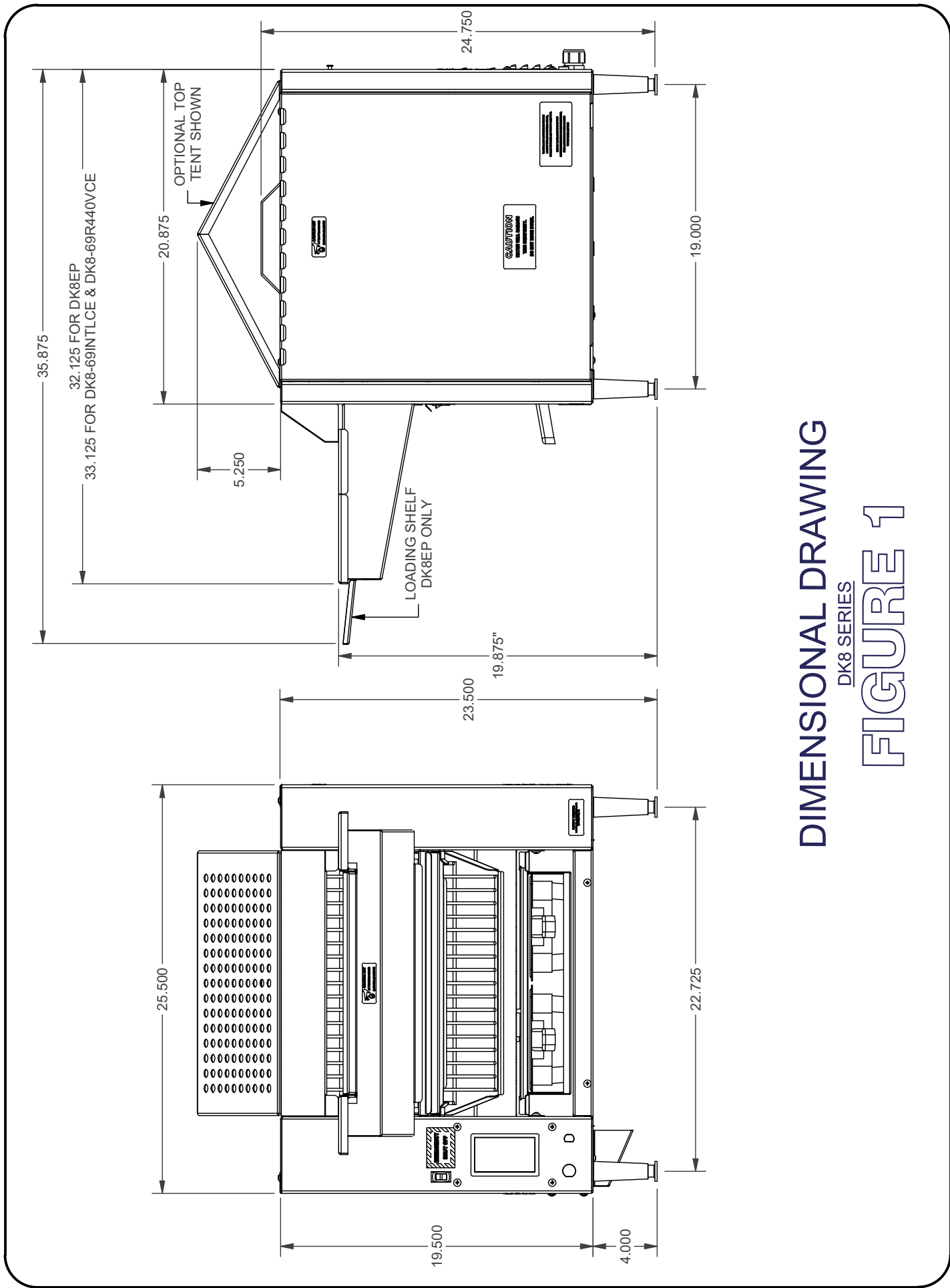
PART #	DESCRIPTION	QUANTITY PER UNIT	FIGURE
500940	Motor (FR69B)	2	6A, Schematic
504331	Pan, 1/3 Amber 2 1/2" Tall (Not DK8EP,DK3-126BCD)	2	2, 2A
168847	Pan, Juice Asby (FR69B)	1	2A
131398	Pick-up Mount Motor (FR15B)	1	6
131398	Pick-up Mount Motor (FR69B)	2	6A
501991	Pick-up, Motor (FR15B)	1	6, Schematic
501991	Pick-up, Motor (FR69B)	2	6A, Schematic
500033	Pliers, Chain Conveyor	1	4
500035	Roller Chain #35 (FR15B)	2 FT (1)	6
500035	Roller Chain #35 (FR69B)	2 FT (2)	6A
503934	Solid State Relay (Not on DK8-69R440VCE)	4	Schematic
504726	Solid State Relay, 480V Rated (DK8-69R440VCE Only)	4	Schematic
169825	Scraper Axle and Tube Bundle	1	4
100367	Scraper Axle (FR69B)	1	4
166372	Shaft, Drive	1	6
120083	Shaft, Drive	1	6A
167327	Side Skin	2	2, 2A
128156	Spacer Washer	2	6
168808	Sprocket, Asby .755" ID	1	6A
129210	Sprocket, 3524 x .750"	1	6A
135474	Sprocket, 3524 x 1.063"	1	6A
144792	Sprocket, Broiler 8 Tooth	2	6
128866	Sprocket Drive (Broiler) 3524	2	6
500040	Sprocket Drive (Motor) 3510 (FR15B)	1	6
168420	Stand, Broiler 31.5" Height (51" Total Height w/ Broiler)	1	N/A
168430	Stand, Broiler 25.5" Height (45" Total Height w/ Broiler)	1	N/A
501864	Switch, Rocker Style	1	Schematic
500205	Terminal Block, 4 Pole	1	Schematic
168047	Tent, Perforated (Optional)	1	2
154408	Terminal Strip 9 Pole	1	Schematic
148311	Terminal Strip 6 Pole	1	Schematic
502390	Thermocouple	2	Schematic
144783	Transfer Belt Loader Asby (DK8EP Only before S/N 05066)	1	2
168548	Transfer Belt Loader Asby (DK8EP Only S/N 05066 and after)	1	2
147603	Transfer Belt Asby (FR69B)	1	2A
502916	Transformer 120/24	1	Schematic
504727	Transformer, 440V 250VA (DK8-69R440VCE Only)	1	Schematic
167328	Tray, Product Pan 1/3 Size Pans with Handles (Not DK8EP)	1	2
168998	Tray, Product Pan (DK8EP Only)	1	2
504378	Trivet, 1/3 Size Pan (Not DK8EP,DK3-126BCD)	2	2
166352	Tube Bundle S/N 05065 and Before	1	3

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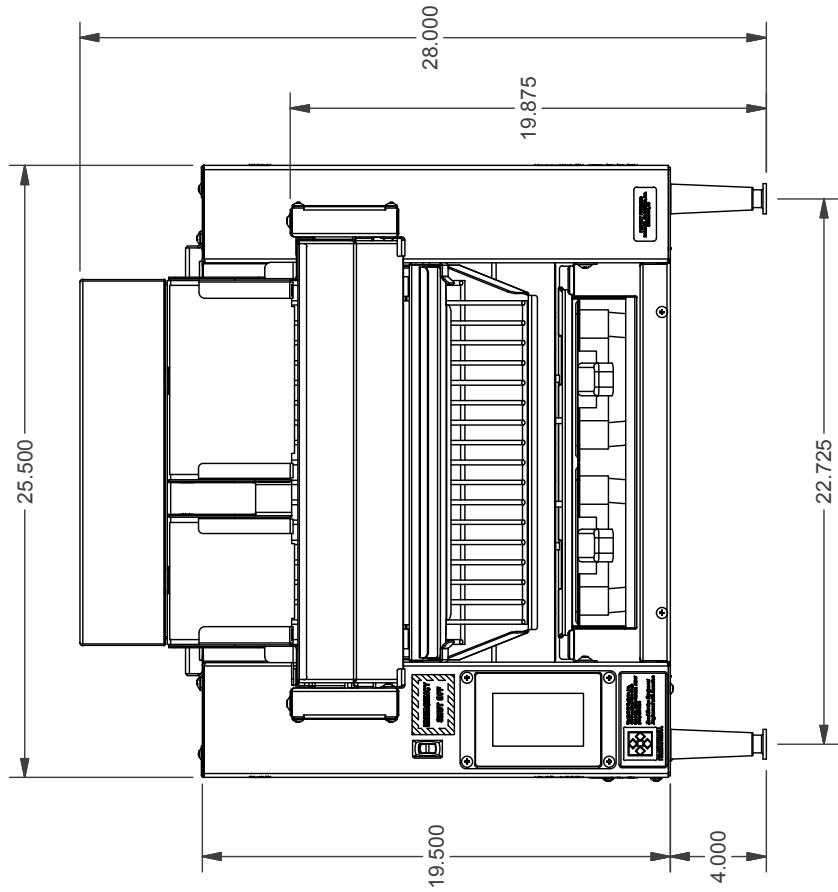
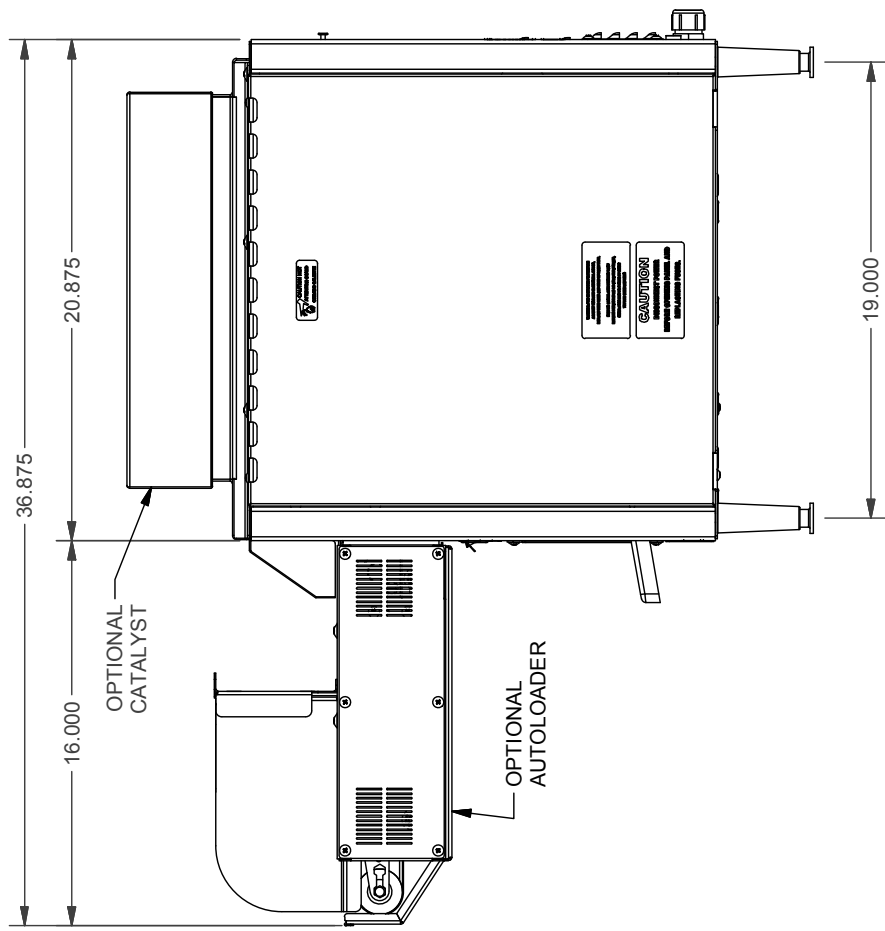
MODEL FR15B FR69B 126B AUTOBROIL™ WITH TOUCHSCREEN CONTROL



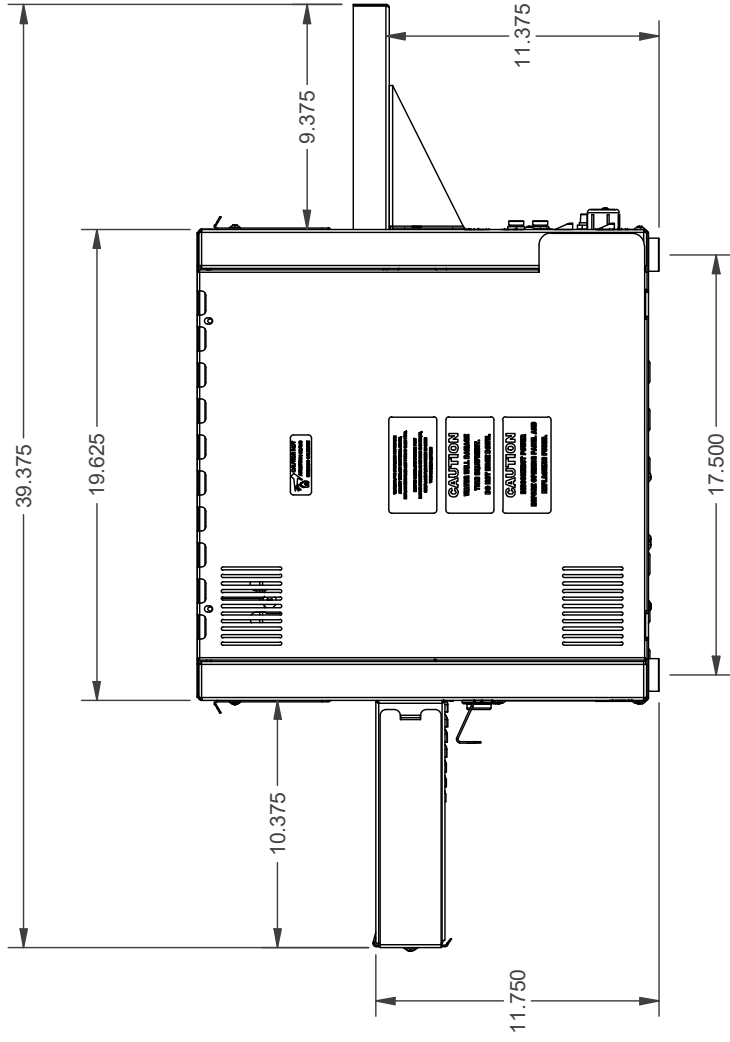
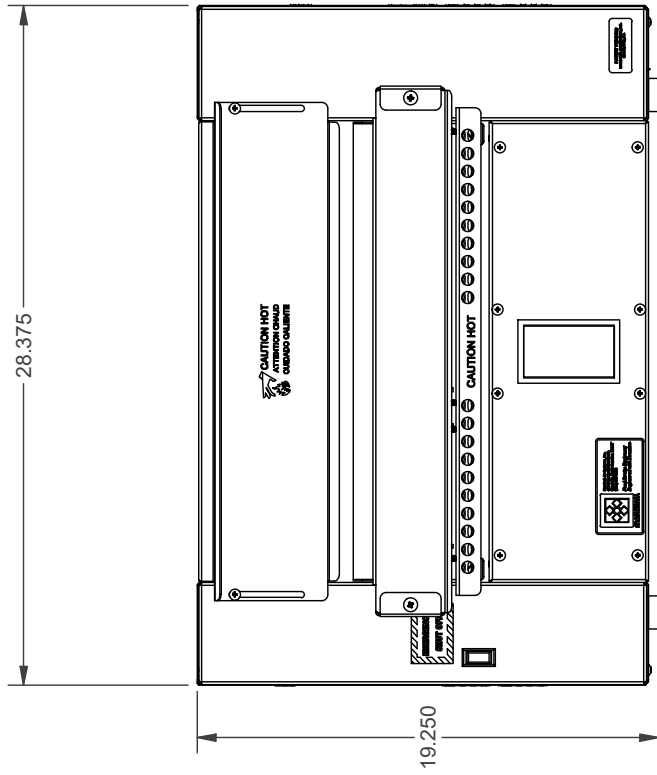
PART #	DESCRIPTION	QUANTITY PER UNIT	FIGURE
168041	Tube Bundle S/N 05066 and After	1	3
168814	Tube Bundle (FR69B)	1	3A
168805	Tube, Overdrive (FR69B)	1	6A
185577	Tube, Overdrive (126B)	1	6B
166356	Wire Rack Extended	1	2, 2A



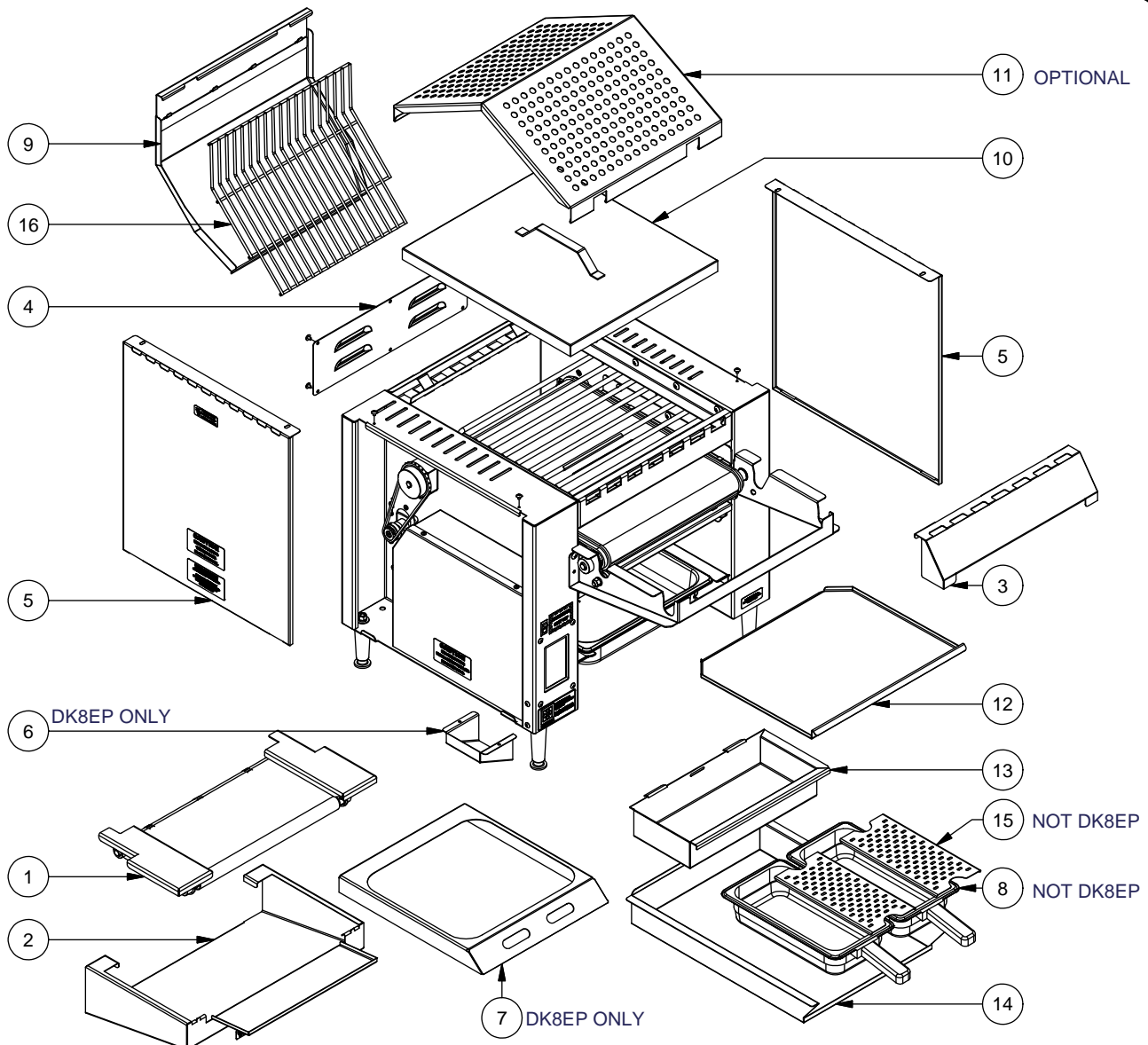
DIMENSIONAL DRAWING
 DK8 SERIES
FIGURE 1



DIMENSIONAL DRAWING
 FR69B WITH AUTOLOADER
FIGURE 1A

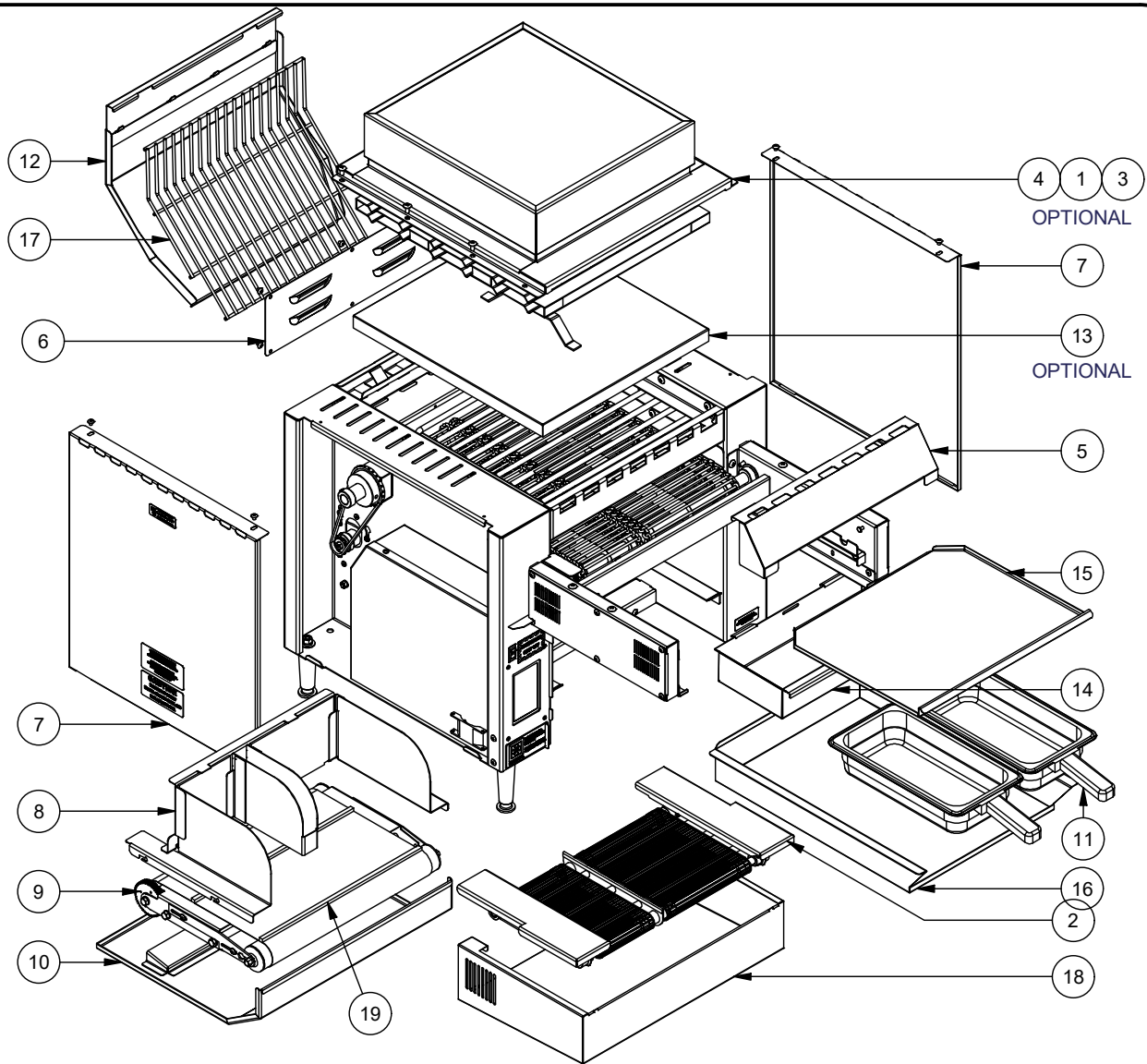


DIMENSIONAL DRAWING
DK3 SERIES
FIGURE 1B



Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	168548	CONVEYOR, AUTOLOADER ASBY (S/N 05066 & AFTER)	1
	144783	CONVEYOR, AUTOLOADER ASBY (S/N BEFORE 05066)	
2	167193	COVER, AUTOBROIL ARM (S/N 05066 & AFTER)	1
	143745	COVER, AUTOBROIL ARM (S/N BEFORE 05066)	
3	167711	COVER, FRONT TUNNEL	1
4	167703	COVER, MOTOR	1
5	167327	COVER, SIDE SKIN	2
6	165434	DIVERTER, COOLING FAN	1
7	168964	INSERT, PAN LOCATER	1
8	504331	PAN, 1/3 AMBER 2 1/2" TALL (NOT DK8EP)	2
9	166370	PRODUCT SLIDE	1
10	165369	SHIELD, HEAT TOP	1
11	168047	TENT, PERFORATED (OPTIONAL ON DK8EP)	1
12	165379	TRAY, GREASE	1
13	167715	TRAY, PAN	1
14	167328	TRAY, PRODUCT PAN (NOT DK8EP)	1
	168998	TRAY, PRODUCT PAN (DK8EP ONLY)	
15	504378	TRIVET, DRAIN SHELF 1/3 SIZE PAN (NOT DK8EP)	2
16	166356	WIRE RACK	1

EXTERNAL REMOVABLE PARTS
 FR15B WITH TRANSFER BELT LOADING ARMS
FIGURE 2



Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	168906	ASBY, HEAT SHIELD (OPTIONAL)	1
2	147603	ASBY, LOADER CARRIAGE (DK8-69INTLCE & DK8-69R440VCE ONLY)	1
3	504248	CATALYST (OPTIONAL)	1
4	168909	CATALYST FRAME ASBY (OPTIONAL)	1
5	167711	COVER, FRONT TUNNEL	1
	169020	COVER, FRONT TUNNEL (WITH OPTIONAL CATALYST)	
6	167703	COVER, MOTOR	1
7	167327	COVER, SIDE SKIN	2
8	168900	GATE, LOADER ASBY (DK8-69DQ ONLY)	1
9	159021	LOADER FRAME ASBY (DK8-69DQ ONLY)	1
10	168847	PAN, JUICE ASBY (DK8-69DQ ONLY)	1
11	504331	PAN, 1/3 AMBER 2 1/2" TALL	2
12	166370	PRODUCT SLIDE, BROILER SECTION	1
13	165369	SHIELD, HEAT TOP (STANDARD)	1
14	167715	CATCH, GREASE	1
15	165379	TRAY, GREASE	1
16	167328	TRAY, PRODUCT PAN	1
17	166356	WIRE RACK	1
18	169357	WRAP, AUTOLOADER ARM COVER (DK8-69INTLCE & DK8-69R440VCE ONLY)	1
19	504307	BELT, LOADER ONLY (DK8-69DQ ONLY)	1

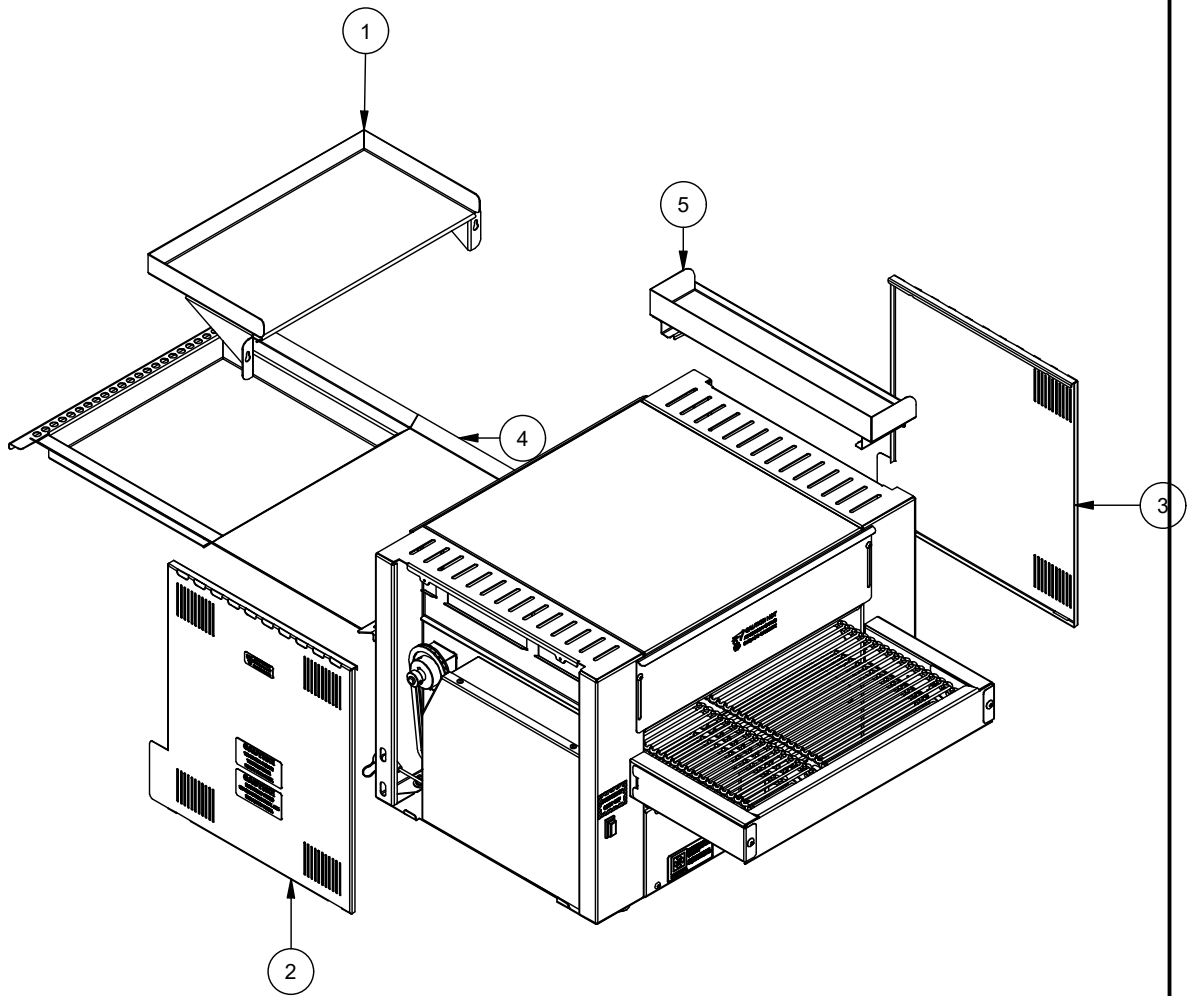
EXTERNAL REMOVABLE PARTS

FR69B WITH TRANSFER BELT LOADING ARMS

FIGURE 2A

167717FIG2A RV022620

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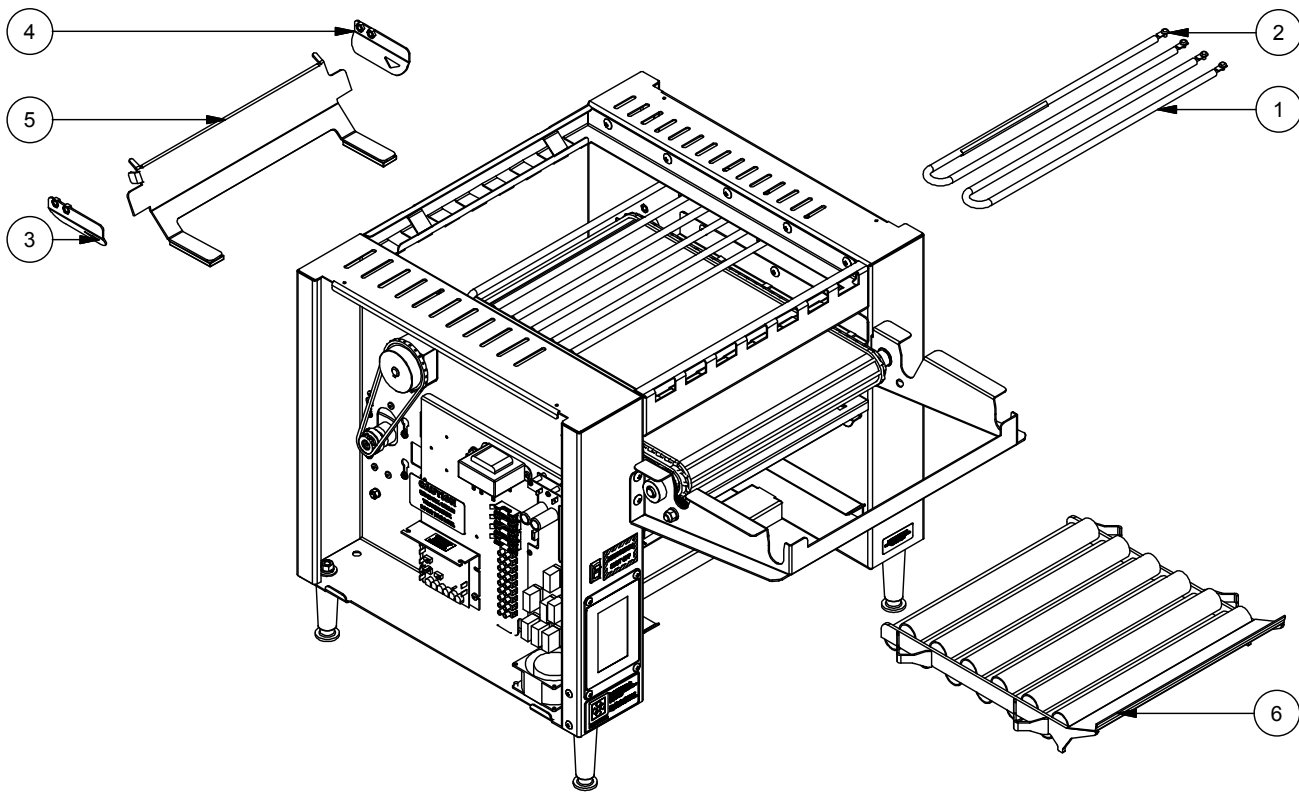


Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	185570	ASBY, PRODUCT SLIDE	1
2	185565	COVER, LH SIDE	1
3	185567	COVER, RH SIDE	1
4	183159	TRAY, CRUMB	1
5	184909	WELDMENT, SPICE RACK	2

EXTERNAL REMOVABLE PARTS

126B

FIGURE 2B

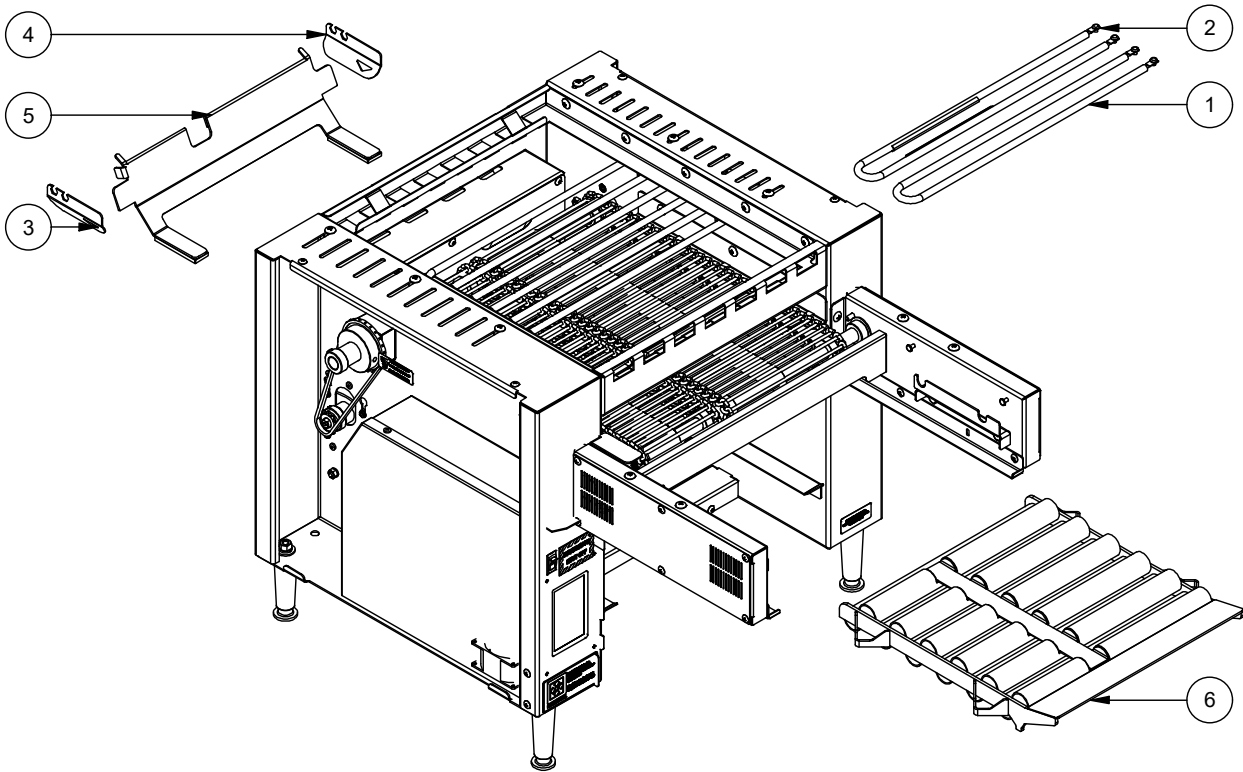


Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	500049	ELEMENT, 915W 220V	7
2	166458	ELEMENT, W/T-COUPLE CLIP	2
3	165423	FRAME, LH	1
4	165425	FRAME, RH	1
5	166365	MEAT STRIPPER	1
6	166352	TUBE BUNDLE, ASBY (BEFORE S/N 05066)	1
	168041	TUBE BUNDLE, ASBY (S/N 05066 & AFTER)	

INTERNAL REMOVABLE PARTS

FR15B WITH TRANSFER BELT LOADING ARMS

FIGURE 3

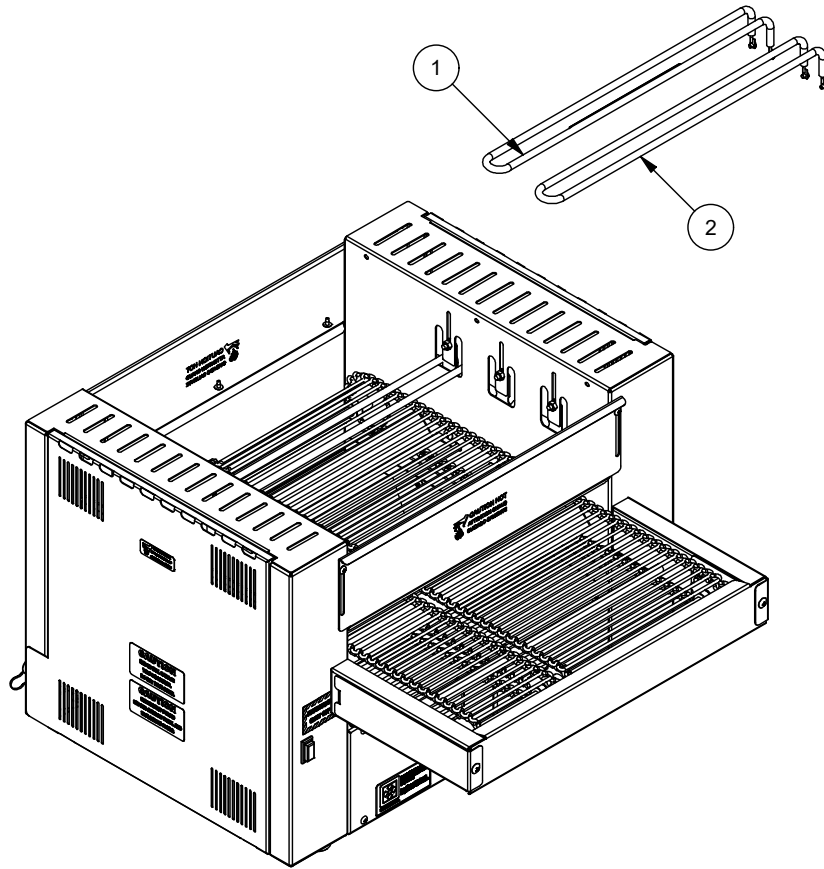


Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	500049	ELEMENT, 915W 220V	7
	504719	ELEMENT, 915W 440V (DK8-69R440VCE ONLY)	
2	166458	ELEMENT, W/T-COUPLE CLIP, 915W 220V	2
	181909	ELEMENT, W/T-COUPLE CLIP, 915W 440V (DK8-69R440VCE ONLY)	
3	165424	HANGER, MEAT STRIPPER LH	1
4	165426	HANGER, MEAT STRIPPER RH	1
5	168812	MEAT STRIPPER ASBY	1
6	168814	TUBE BUNDLE, ASBY	1

INTERNAL REMOVABLE PARTS

FR69B WITH TRANSFER BELT LOADING ARMS

FIGURE 3A

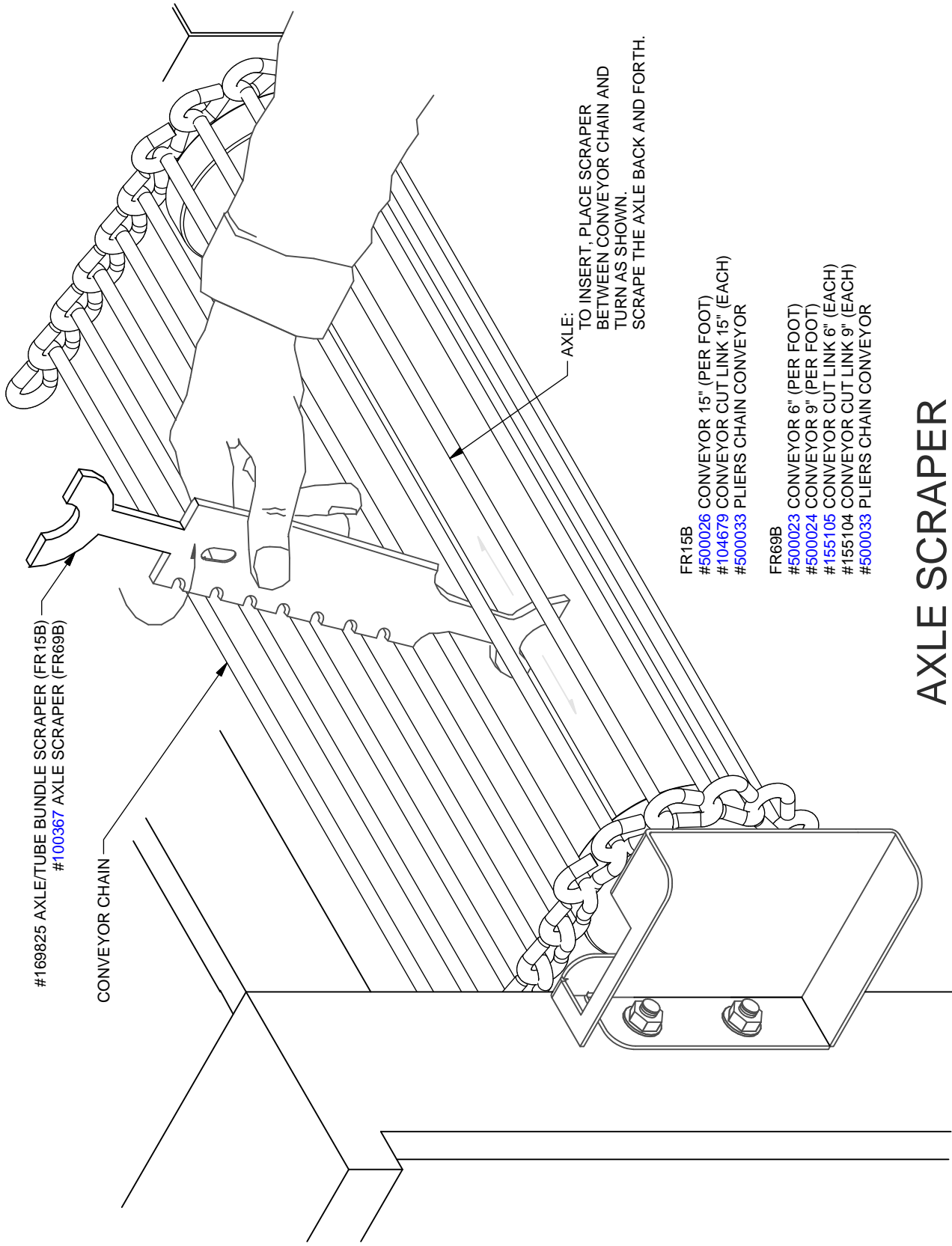


Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	183165	ELEMENT, 1325W 208V	2
2	504734	ELEMENT, 1325W 208V (183151)	4

INTERNAL REMOVABLE PARTS

126B

FIGURE 3B



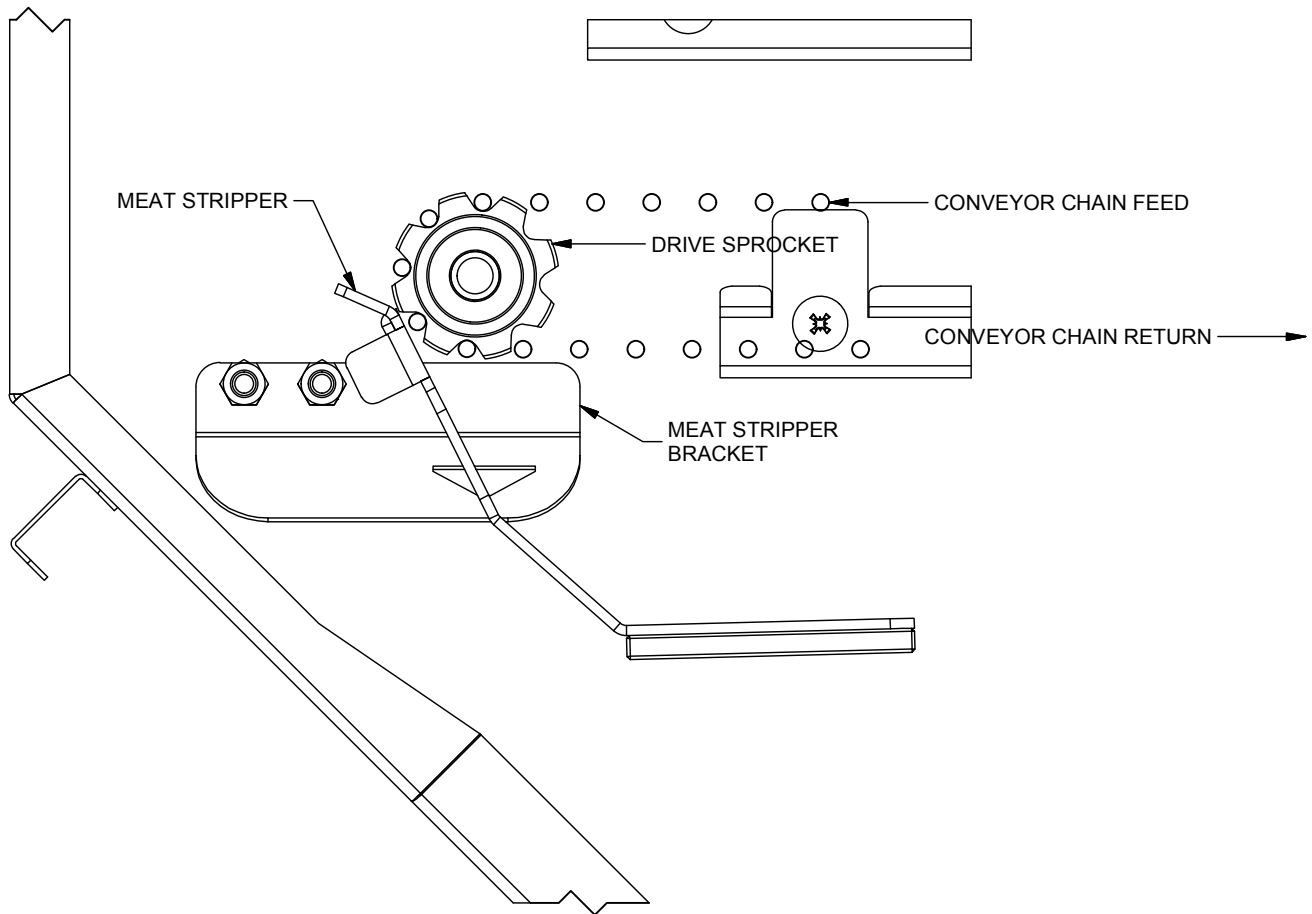
#169825 AXLE/TUBE BUNDLE SCRAPER (FR15B)
 #100367 AXLE SCRAPER (FR69B)

CONVEYOR CHAIN

AXLE:
 TO INSERT, PLACE SCRAPER
 BETWEEN CONVEYOR CHAIN AND
 TURN AS SHOWN.
 SCRAPE THE AXLE BACK AND FORTH.

- FR15B
 #500026 CONVEYOR 15" (PER FOOT)
 #104679 CONVEYOR CUT LINK 15" (EACH)
 #500033 PLIERS CHAIN CONVEYOR
- FR69B
 #500023 CONVEYOR 6" (PER FOOT)
 #500024 CONVEYOR 9" (PER FOOT)
 #155105 CONVEYOR CUT LINK 6" (EACH)
 #155104 CONVEYOR CUT LINK 9" (EACH)
 #500033 PLIERS CHAIN CONVEYOR

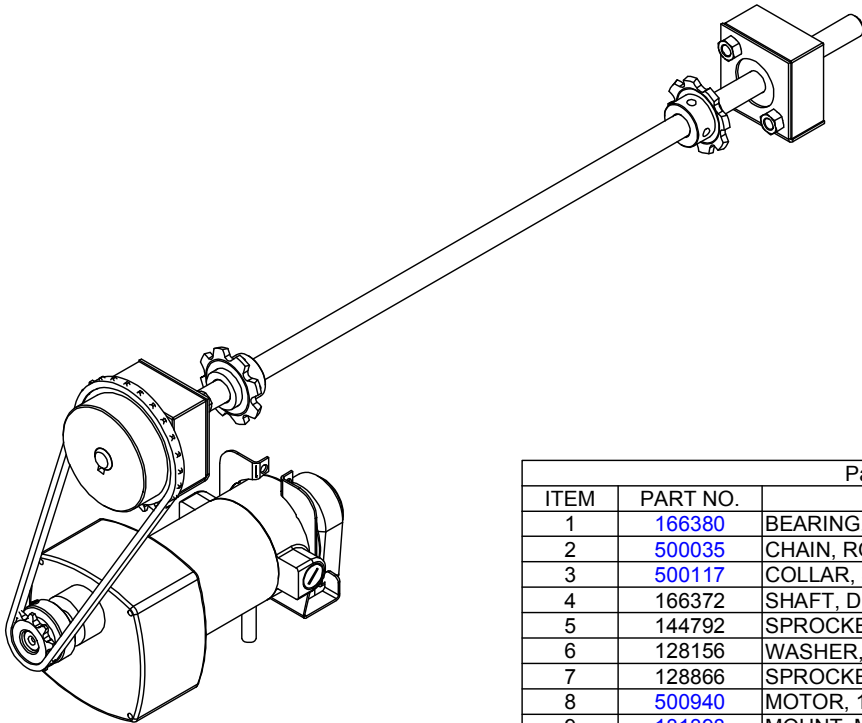
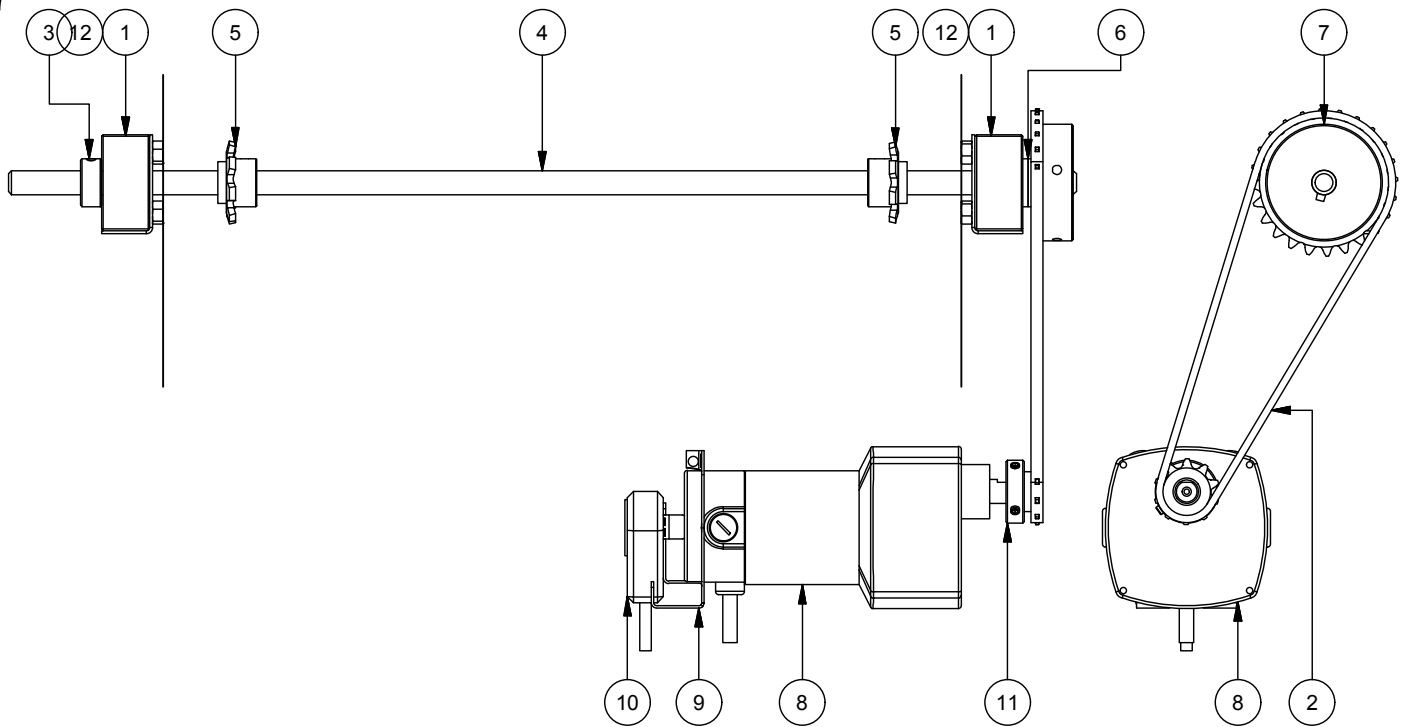
AXLE SCRAPER
 FR15B & FR69B WITH TRANSFER BELT LOADING ARMS
FIGURE 4



ADJUSTMENT INSTRUCTIONS:

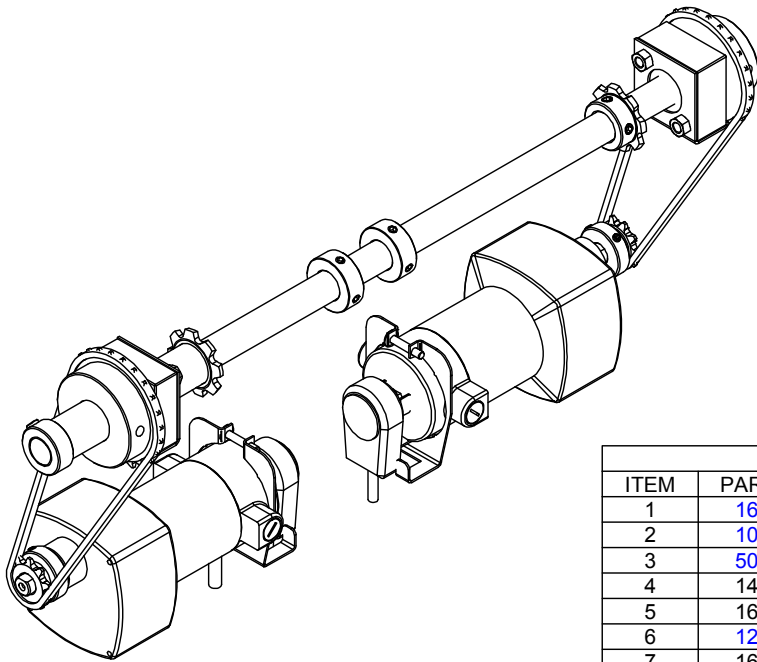
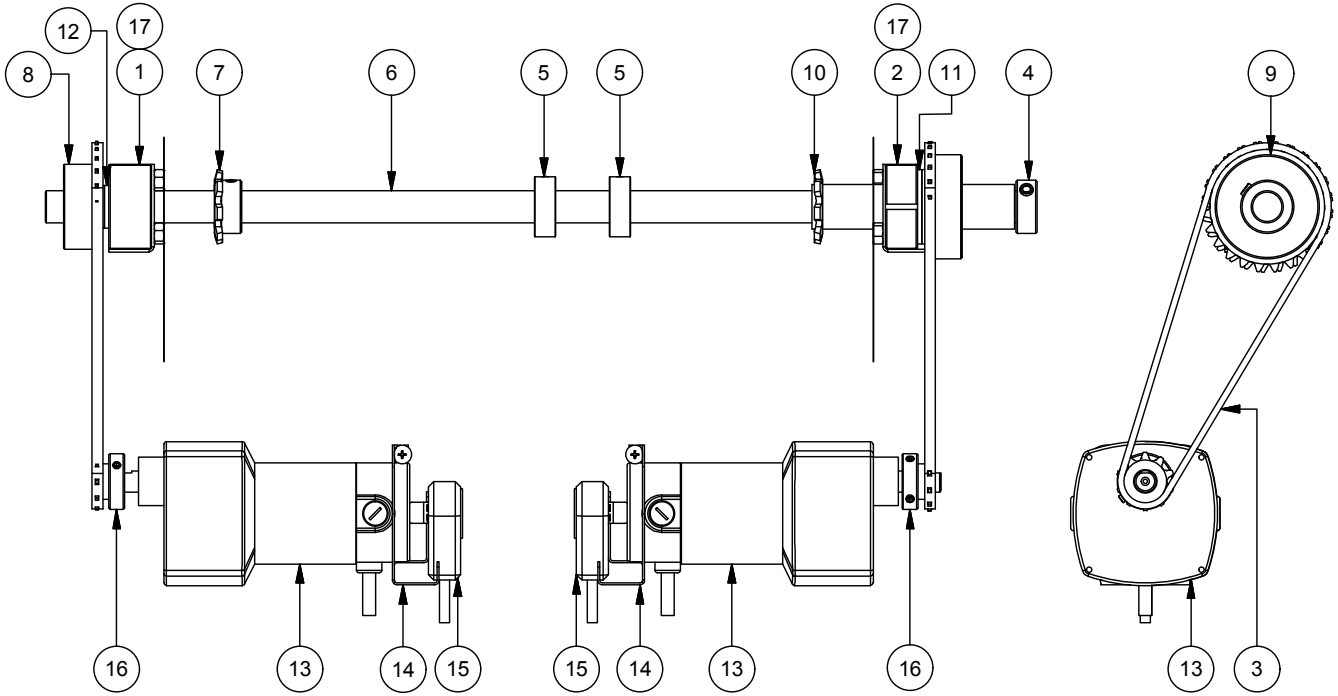
1. MOVE BRACKET TOWARD CONVEYOR CHAIN UNTIL STRIPPER EVENLY AND LIGHTLY TOUCHES CONVEYOR CHAIN.
2. SECURE BRACKETS.
3. START CONVEYOR CHAINS AND CHECK FOR SMOOTH OPERATION WITHOUT BINDING.
4. ADJUST AS NEEDED (SEE STEP 2) FOR BEST STRIPPING RESULTS.

MEAT STRIPPER
FR15B & FR69B WITH TRANSFER BELT LOADING ARMS
FIGURE 5



Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	166380	BEARING, .500" SHAFT TEFLON OUTER	2
2	500035	CHAIN, ROLLER #35	1
3	500117	COLLAR, SET 0.505" ID X 1.000" OD	1
4	166372	SHAFT, DRIVE	1
5	144792	SPROCKET, BROILER CHAIN ASBY	2
6	128156	WASHER, SPACER 1" OD X .510" ID	2
7	128866	SPROCKET, 3524 X 0.505"	1
8	500940	MOTOR, 1/50 HP, 90V DC, 9RPM 40IN-LB	1
9	131398	MOUNT, MOTOR PICK-UP	1
10	501991	PICK-UP, MOTOR SPEED CONTROL	1
11	500040	SPROCKET, 3510 X .500"	1
12	165681	STANDOFF, BEARING	2

DRIVE ASSEMBLY
FR15B WITH TRANSFER BELT LOADING ARMS
FIGURE 6

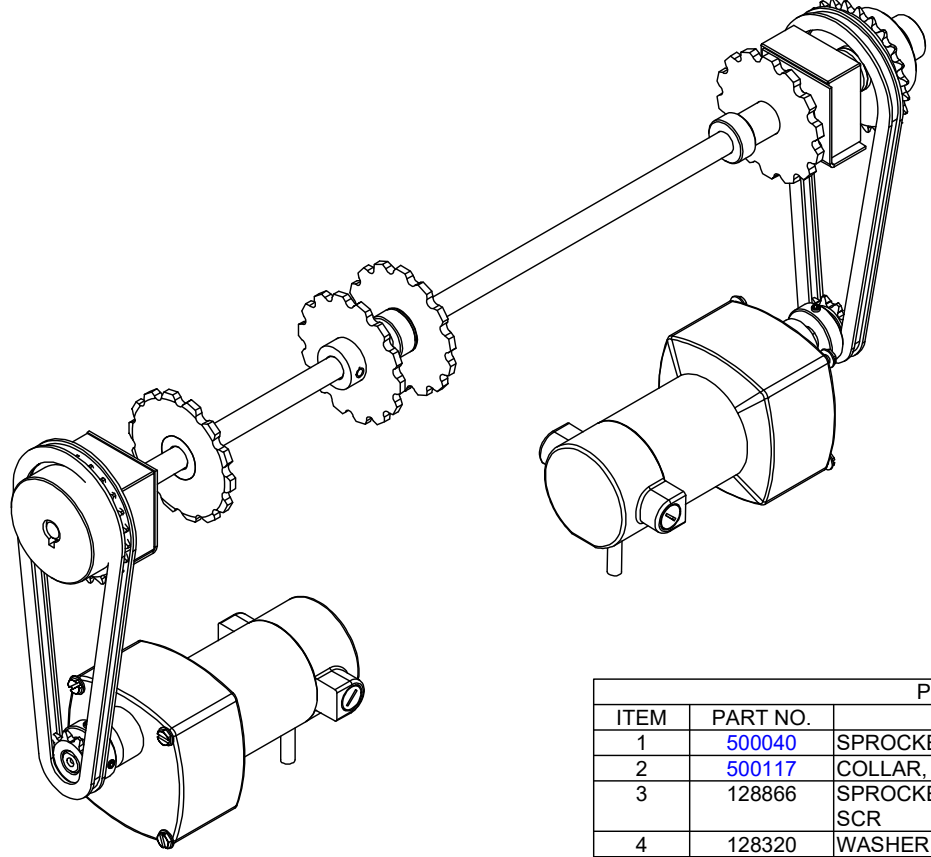
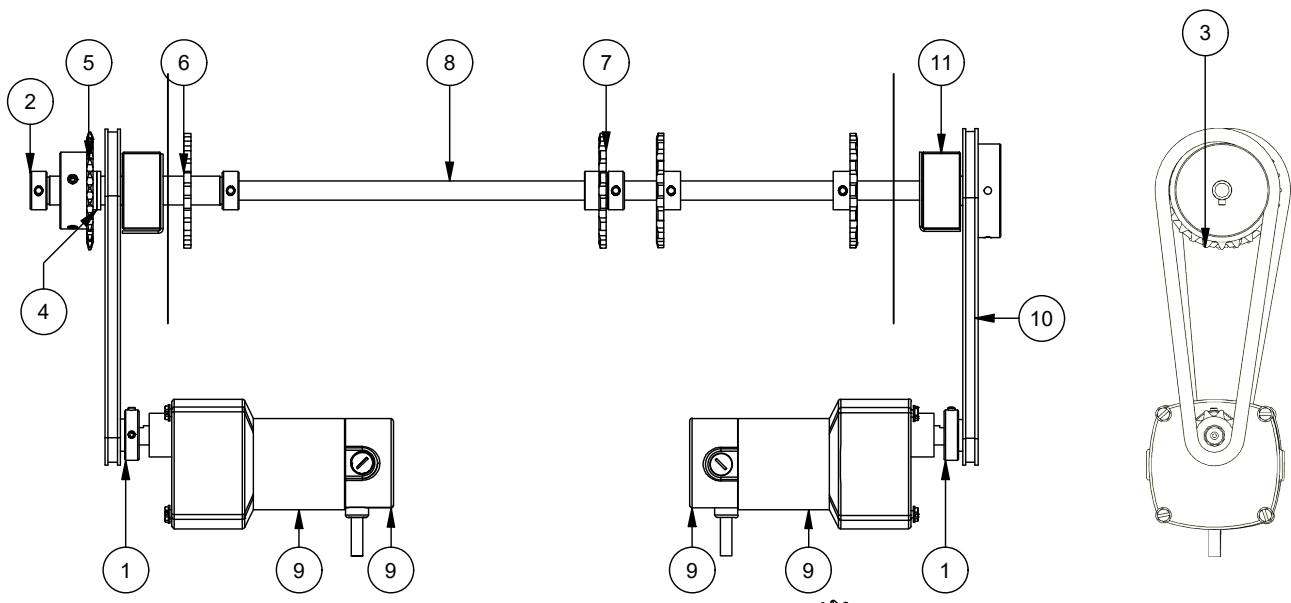


Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	166380	BEARING, .500" SHAFT TEFLON OUTER	1
2	100977	BEARING, 1" SHAFT TEFLON OUTER	1
3	500035	CHAIN, ROLLER #35	2
4	140163	COLLAR, SET 0.755" ID X 1.250" OD	1
5	168809	IDLER 1.405" OD X .755" ID	2
6	120083	SHAFT, DRIVE .750 X 23.250	1
7	168808	SPROCKET ASBY, 0.755" ID	1
8	129210	SPROCKET, 3524 X .750"	1
9	135474	SPROCKET, 3524 X 1.063"	1
10	168805	TUBE, OVERDRIVE ASBY	1
11	128322	WASHER 1.750" OD X 1.090" ID	2
12	128320	WASHER, 1.000" OD X 0.765" ID	2
13	500940	MOTOR, 1/50 HP, 90V DC, 9RPM 40IN-LB	2
14	131398	MOUNT, MOTOR PICK-UP	2
15	501991	PICK-UP, MOTOR SPEED CONTROL	2
16	500040	SPROCKET, 3510 X .500"	2
17	165681	STANDOFF, BEARING	2

DRIVE ASSEMBLY

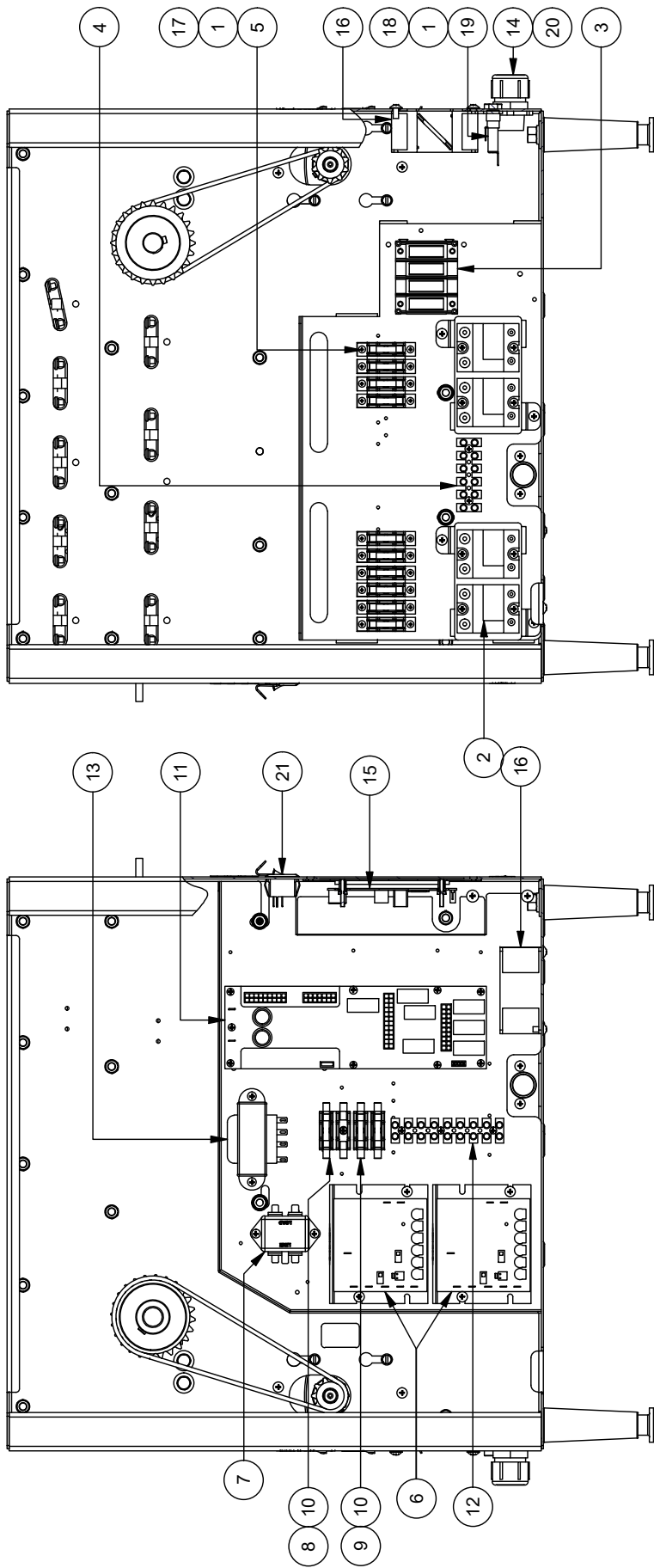
FR69B WITH TRANSFER BELT LOADING ARMS

FIGURE 6A



Parts List			
ITEM	PART NO.	DESCRIPTION	QTY
1	500040	SPROCKET, 3510 X .500"	2
2	500117	COLLAR, SET 0.505" ID X 1.000" OD	1
3	128866	SPROCKET, 3524 X 0.505", 1/4"-20 SET SCR	1
4	128320	WASHER, 1.000" OD X 0.765" ID	2
5	129210	SPROCKET 3524 X .755" 502839	1
6	185577	OVERDRIVE TUBE ASBY	1
7	165684	IDLER, SPROCKET ASBY 3.000" DIA OD	1
8	185576	SHAFT, DRIVE	1
9	504467	MOTOR, 1/50 HP, 90V DC, 9RPM 40IN-LB	2
10	185593	CHAIN, ROLLER #35	2
11	166379	BEARING, .750" SHAFT TEFLON OUTER	1

DRIVE ASSEMBLY
126B
FIGURE 6B

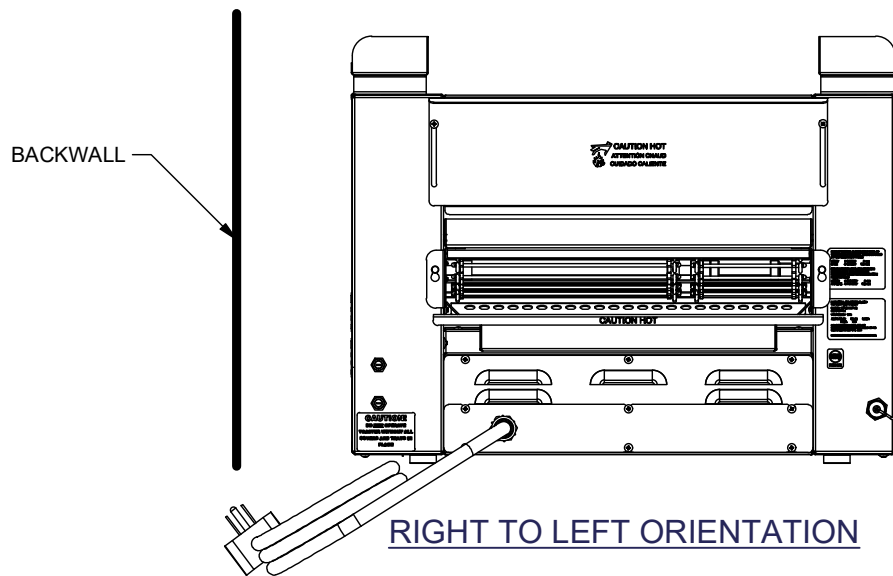
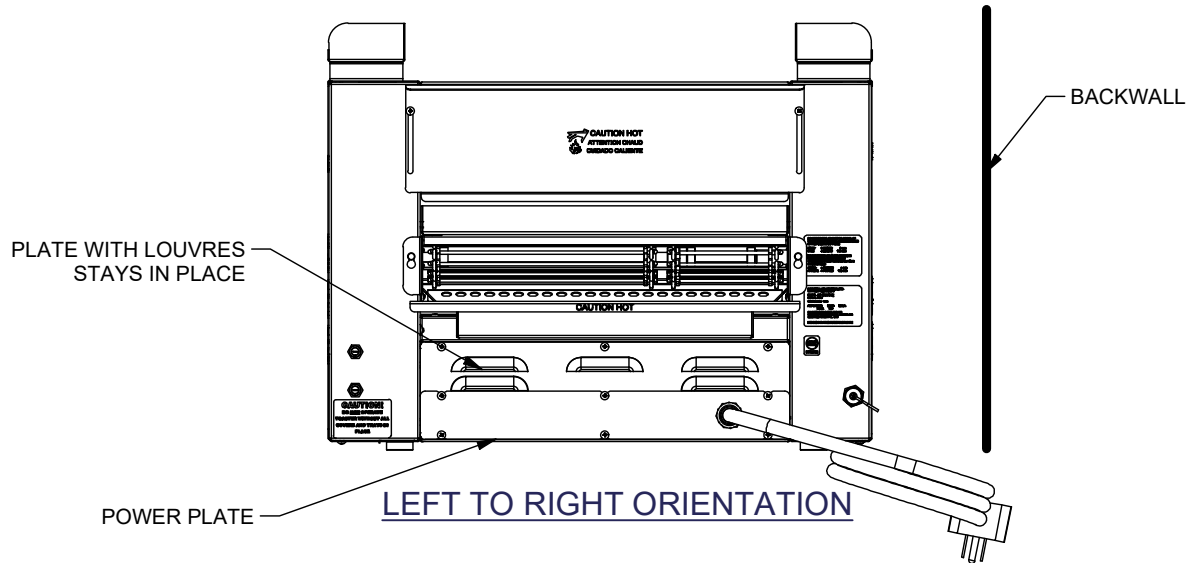


Parts List		Parts List			
ITEM/PART NO.	DESCRIPTION	QTY	ITEM/PART NO.	DESCRIPTION	QTY
1	502739 FUSE, 10A, AGC 10 250V	* UP TO 10	12	154408 TERMINAL STRIP, 9 POLE 20A	1
2	503934 RELAY, SOLID STATE 50A	4	13	502916 TRANSFORMER, 115/230V PRI. 24V SEC	1
3	500205 TERMINAL BLOCK, 4 POLE 600V 115A	1	14	500666 CONNECTOR, STRAIN RELIEF	1
4	148311 TERMINAL STRIP, 6 POLE 20A	1	15	167720 CONTROL, TOUCHSCREEN (DK8EP ONLY)	1
5	504081 TWO POLE FUSE BLOCK	5	168291 CONTROL, TOUCHSCREEN (DK8-69DQ ONLY)	1	
6	141643 CIRCUIT BOARD, 230V, SPEC 0186 (FR15B MODELS)	1	169403 CONTROL, TOUCHSCREEN (DK8-69INTLCE ONLY)	1	
		2	186004 CONTROL, TOUCHSCREEN (DK3-126BCD ONLY)		
7	503574 FILTER, ELECTRICAL NOISE (DK8-69INTLCE ONLY)	1	16	503104 FAN, COOLING, BOXER, 230VAC	2
8	501139 FUSE, 0.5A, AGC 0.5 250V	* UP TO 2	17	502304 FUSE, 15A, AGC 15 250V	* UP TO 9
9	500061 FUSE, 1.5A, AGC 1.5 250V	* UP TO 4	18	503128 FUSE, 5A 5MM (DK8-69INTLCE ONLY)	1
10	500069 FUSEBLOCK, 2 POLE	* UP TO 3	19	500068 FUSEHOLDER, PANEL MT	2
11	504285 MODULE, I/O INTERFACE	1	503099 FUSEHOLDER, PANEL MT INTL (DK8-69INTLCE ONLY)	1	
			20	501328 NUT, LOCK CONDUIT 1"	1
			21	501864 SWITCH, ROCKER, SPST	1

* REFER TO SCHEMATIC FOR EXACT QUANTITY

ELECTRICAL COMPONENTS

FIGURE 7



1. REMOVE (6) SCREWS FROM POWER PLATE TO UN-MOUNT
2. FLIP POWER PLATE SO THAT CORD IS TOWARD WALL
3. MOUNT POWER PLATE USING (6) SCREWS, BEING CAREFUL NOT TO PINCH ANY WIRES

POWER CORD ORIENTATION

FIGURE 8



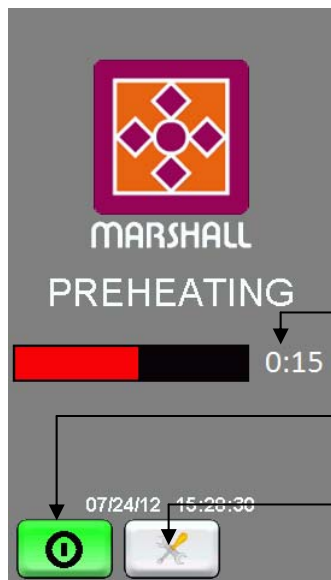
OFF MODE:

This is the OFF mode home screen. In this mode, the power button is red to indicate that even though the broiler control is powered on, the broiler itself is turned off.

Power Button: Press and hold for 2 seconds to turn broiler on. The broiler will go to PREHEATING mode.

Tools Button: Press to go to the tools screen to navigate between the different tools. See owner's manual for more details.

Food Probe Button: The food probe button is grayed out to indicate that the food probe functionality is inactive while in OFF mode.



PREHEATING MODE:

This is the PREHEATING mode home screen. The PREHEATING mode allows the broiler to reach temperature set point before cooking. In this mode, the power button is green indicating that the broiler is operating. Once the preheat timer has elapsed, the broiler will go to cook mode.

Preheat Timer: The remaining preheat time is displayed in minutes. The red timer bar gives the user a quick reference of the remaining time versus total time.

Power Button: Press and hold for 2 seconds to turn broiler off. The broiler will go to COOLING DOWN mode.

Tools Button: Press to go to the tools screen to navigate between the different tools. See owner's manual for more details.



READY MODE:

This is the READY mode home screen. This screen shows the BROILER window associated with the BROILER conveyor.

Broiler Belt Window:

The BROILER window shows the active recipe with the belt name, a representative food icon, the recipe name and the recipe cook time. See **MENU MANAGEMENT** in Owner's Manual for more information about adding, modifying or deleting recipes.

To change the broiler recipe:

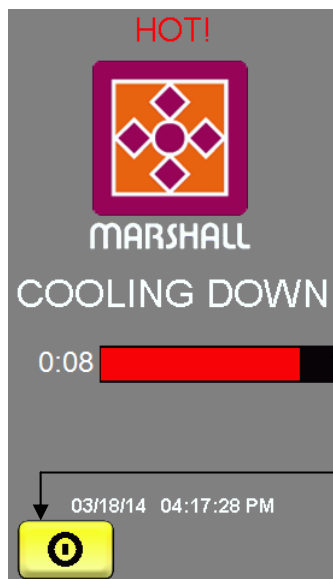
- Press anywhere inside the BROILER window. The select recipe screen will show up.
- Press on one of the available recipes to select. The controller will get back to the cooking home screen showing the newly selected recipe.

Food Probe Button:

- Press to go to the live food probe screen and take live temperature readings of food products. See owner's manual for more details.
- Press and hold to go to the food probe log screen where the user can record temperature measurements for the different food products. Those temperature measurements can later be retrieved using a USB flash drive. See owner's manual for more details.

Tools Button: Press to go to the tools screen to navigate between the different tools. See owner's manual for more details.

Power Button: Press and hold for 2 seconds to turn broiler off. The broiler will go to COOLING DOWN mode.



COOLING DOWN MODE:

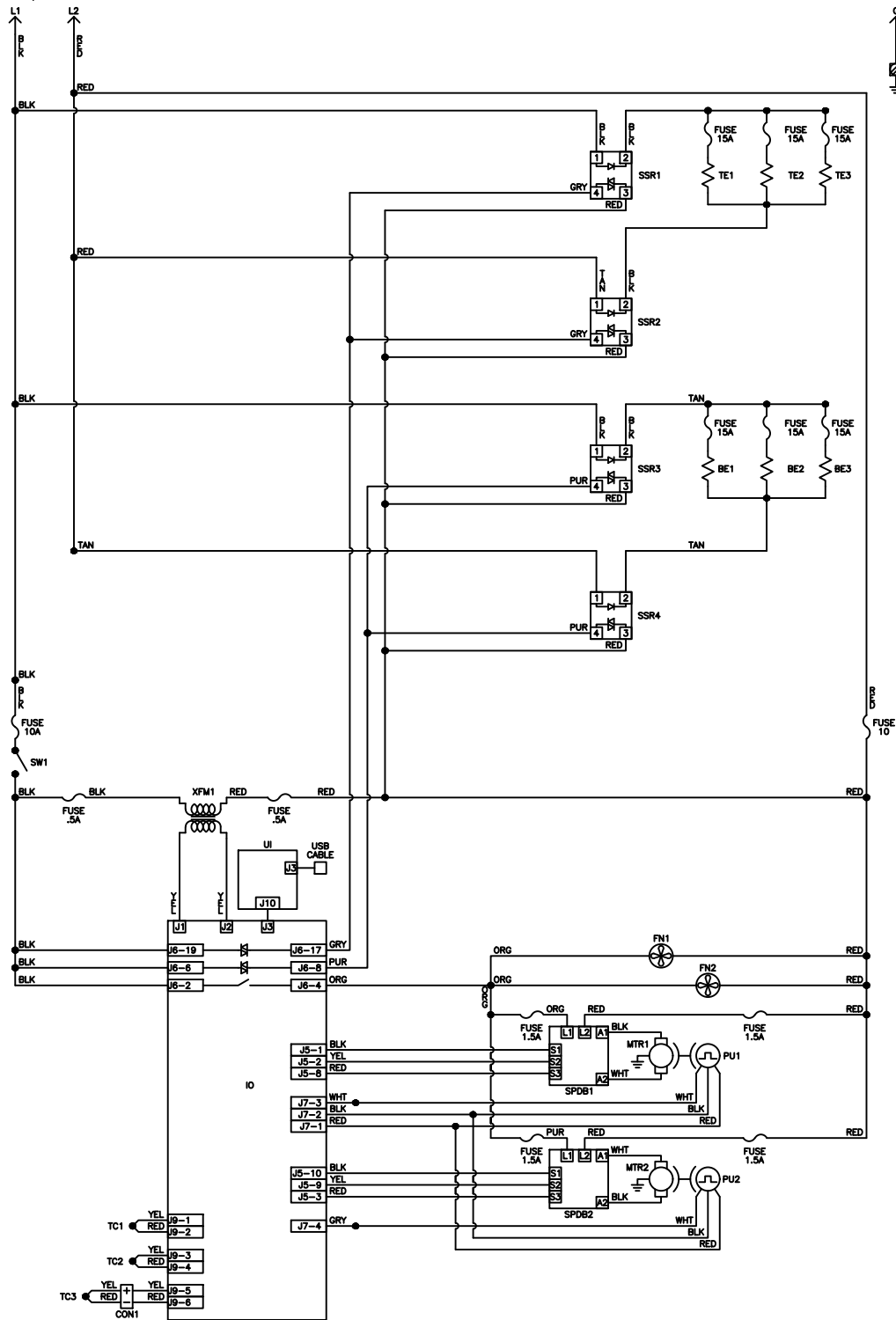
This is the COOLING DOWN mode screen. During the COOLING DOWN mode, the power button is yellow to indicate that all burners are turned off but the conveyors are running at different speeds to prevent grease bonding of the conveyor shafts.

Once cooling down has elapsed, the broiler will go to OFF mode.

Cool Down Timer: The remaining cool down time is displayed in minutes. The red timer bar gives the user a quick reference of the remaining time versus total time.

Power Button: Press and hold for 2 seconds to turn broiler back on. The broiler will go to PREHEATING mode.

SUPPLY VOLTAGE:
200V 1PH
50/60 HZ

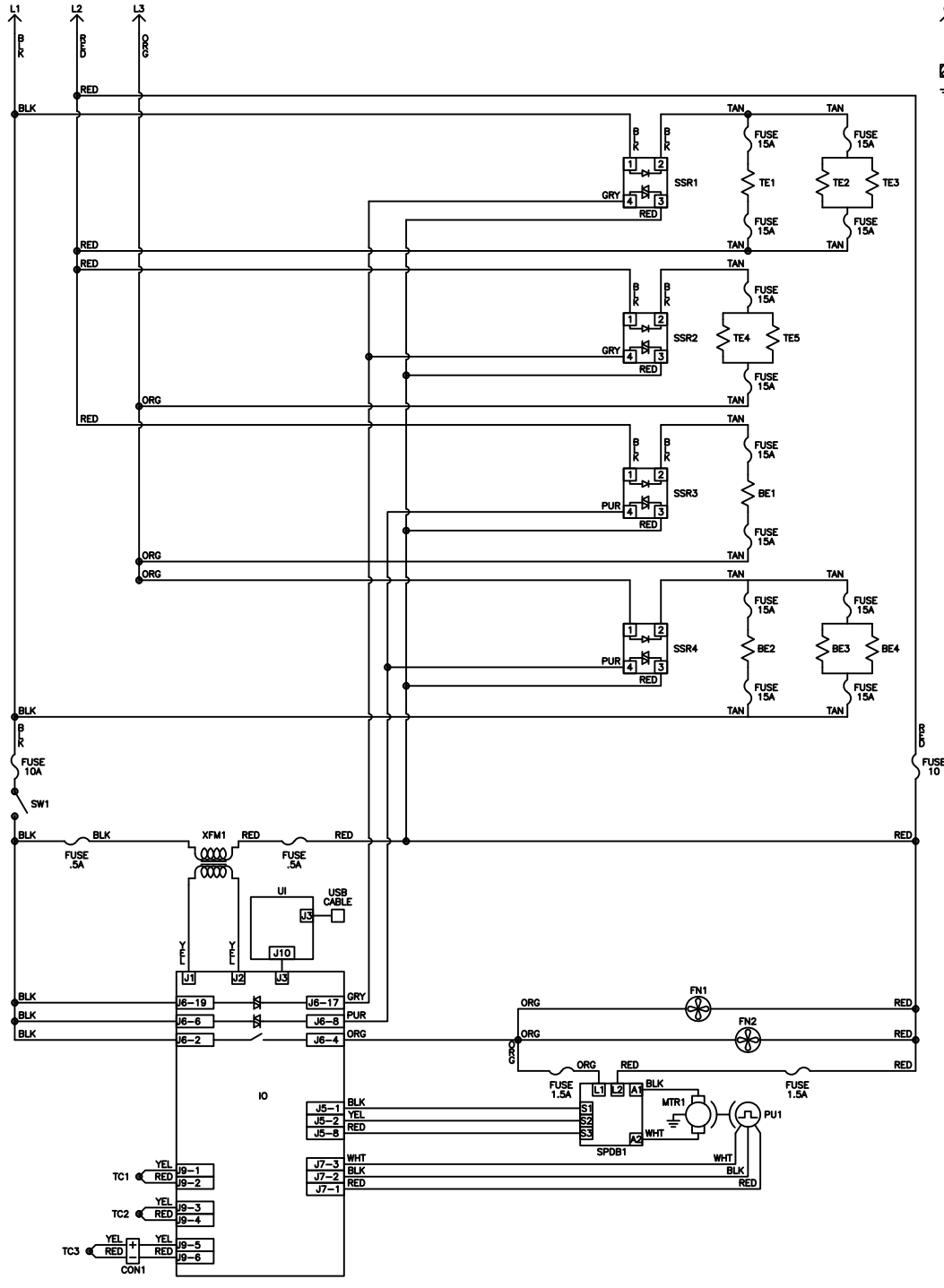


- POWER CORD:
CORD, 6/3 SOOW 250V 7FT LONG - 178965
PLUG, NEMA 8-SOP RIGHT ANGLE - 504720
- G1, GROUND LUG - #500293
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR1, SOLID STATE RELAY - #503934
TE1, ELEMENT - #504734
TE2, ELEMENT WITH CLIP - #183165
TE3, ELEMENT - #504734
- UPPER ELEMENTS
TE1: FRONT ELEMENT
TE3: BACK ELEMENT
- SSR2, SOLID STATE RELAY - #503934
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR3, SOLID STATE RELAY - #503934
BE1, ELEMENT - #504734
BE2, ELEMENT WITH CLIP - #183165
BE3, ELEMENT - #504734
- LOWER ELEMENTS
BE1: FRONT ELEMENT
BE3: BACK ELEMENT
- SSR4, SOLID STATE RELAY - #503934
- FUSE 10A - #502739
FUSE 10A - #502739
- SW1, EMERGENCY SWITCH - #501864
- XFM1, TRANSFORMER 24V - #502916
FUSE .5A - #501139
FUSE .5A - #501139
- UI, CONTROL TOUCHSCREEN:
DK3-126BCD:186004
- USB CABLE - #504428
- IO, INPUT/OUTPUT BOARD - #504285
- FN1, FAN 230V WITH TERMINALS - #167146
FN2, FAN 230V WITH TERMINALS - #167146
- FUSE 1.5A, #500061
FUSE 1.5A, #500061
- SPDB1, SPEED CONTROL BOARD - #141643
MTR1, MOTOR - #500940
PU1, PICK-UP - #501991
- FUSE 1.5A, #500061
FUSE 1.5A, #500061
- SPDB2, SPEED CONTROL BOARD - #141643
MTR2, MOTOR - #500940
PU2, PICK-UP - #501991
- TC1, THERMOCOUPLE ZONE 1 - #502390
TC2, THERMOCOUPLE ZONE 2 - #502390
TC3, FOOD PROBE (OPTIONAL) - #504030
CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

DRAWN BY: LP	DATE: 12/2/2020
GENERIC NAME: WIRE SET	
PRODUCT LINE: FAB	PRODUCT CLASS: BRL
MATERIAL: REFERENCE	
" X " SCALE: 1:1	

MARSHALL AIR SYSTEMS, INC.			
SCHEMATIC			
126B W/ TOUCHSCREEN			
SIZE: A	ROUTE: MANUF	DWG. NO.: 186008	REV.: 0
SCALE: 1:1		IMAGE MAY BE REDUCED NTS	CODE: DK3-126BCD

SUPPLY VOLTAGE:
208/240V 3PH DELTA
50/60 HZ



- CORD, 10/4 7FT LONG NEMA 15-30 RIGHT ANGLE - 504513
- G1, GROUND LUG - #500293
- FUSE 15A, #502304
FUSE 15A, #502304
SSR1, SOLID STATE RELAY - #503934
TE1, ELEMENT - #500049
TE2, ELEMENT WITH CLIP - #166458
TE3, ELEMENT - #500049
- FUSE 15A, #502304
FUSE 15A, #502304
- UPPER ELEMENTS
TE1: FRONT ELEMENT
TE3: BACK ELEMENT
- FUSE 15A, #502304
SSR2, SOLID STATE RELAY - #503934
TE4, ELEMENT - #500049
TE5, ELEMENT - #500049
- FUSE 15A, #502304
- FUSE 15A, #502304
SSR3, SOLID STATE RELAY - #503934
BE1, ELEMENT - #500049
- FUSE 15A, #502304
- LOWER ELEMENTS
BE1: FRONT ELEMENT
BE4: BACK ELEMENT
- FUSE 15A, #502304
SSR4, SOLID STATE RELAY - #503934
BE2, ELEMENT WITH CLIP - #143957
BE3, ELEMENT - #500049
BE4, ELEMENT - #500049
- FUSE 15A, #502304
- FUSE 10A - #502739
FUSE 10A - #502739
- SW1, EMERGENCY SWITCH - #501864
- XFM1, TRANSFORMER 24V - #502916
FUSE .5A - #501139
FUSE .5A - #501139
- UI, CONTROL TOUCHSCREEN:
DK8EP: 167720
DK8: 174566
USB CABLE - #504428
- FN1, FAN 230V WITH TERMINALS - #167146
- FN2, FAN 230V WITH TERMINALS - #167146
- FUSE 1.5A, #500061
FUSE 1.5A, #500061
- IO, INPUT/OUTPUT BOARD - #504285
- SPDB1, SPEED CONTROL BOARD - #141643
MTR1, MOTOR - #500940
PU1, PICK-UP - #501991
- TC1, THERMOCOUPLE ZONE 1 (TOP ELEMENTS) - #502390
- TC2, THERMOCOUPLE ZONE 2 (BOTTOM ELEMENTS) - #502390
- TC3, FOOD PROBE (OPTIONAL) - #504030
CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

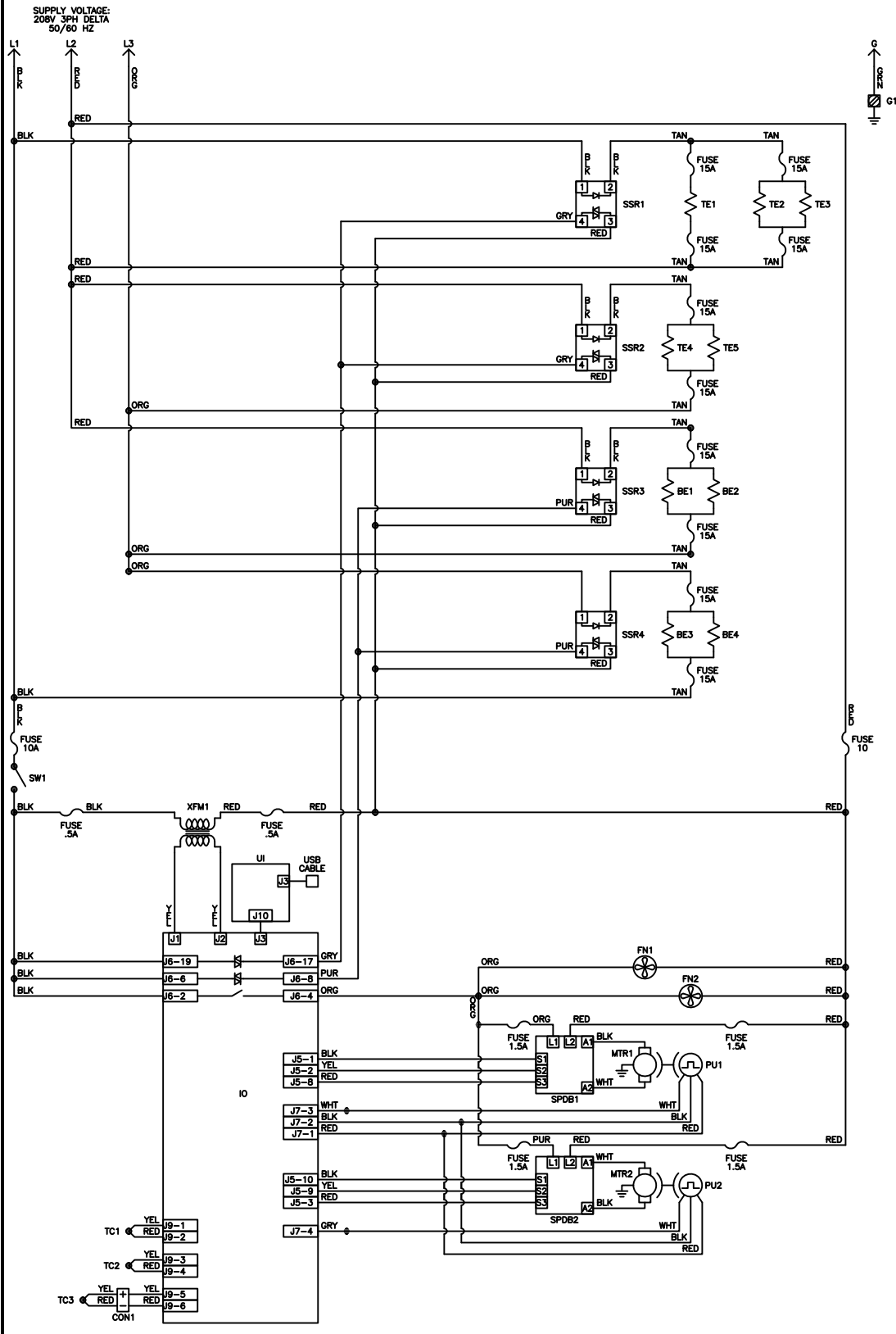
- REMOVED USB & FOOD PROBE NG 10/30/2015
- UPDATED CORD PW 1/8/2018
- SPLIT L2 AT TS1-2A, 3A PW 2/8/2016
- UPDATE ELEMENT WIRING FOR BETTER LOAD DISTRIBUTION & S.A. 1/10/2018
- ADDED 174566 LP 2/26/2018

DRAWN BY: S.A.	DATE: 1/10/2018
GENERIC NAME: SCHEMATIC	
PRODUCT LINE: FAB	PRODUCT CLASS: BRL
MATERIAL: REFERENCE	
" X "	

MARSHALL AIR SYSTEMS, INC.

SCHEMATIC, AUTOBROIL FR15B
208/240V 3PH DELTA WITH TOUCHSCREEN

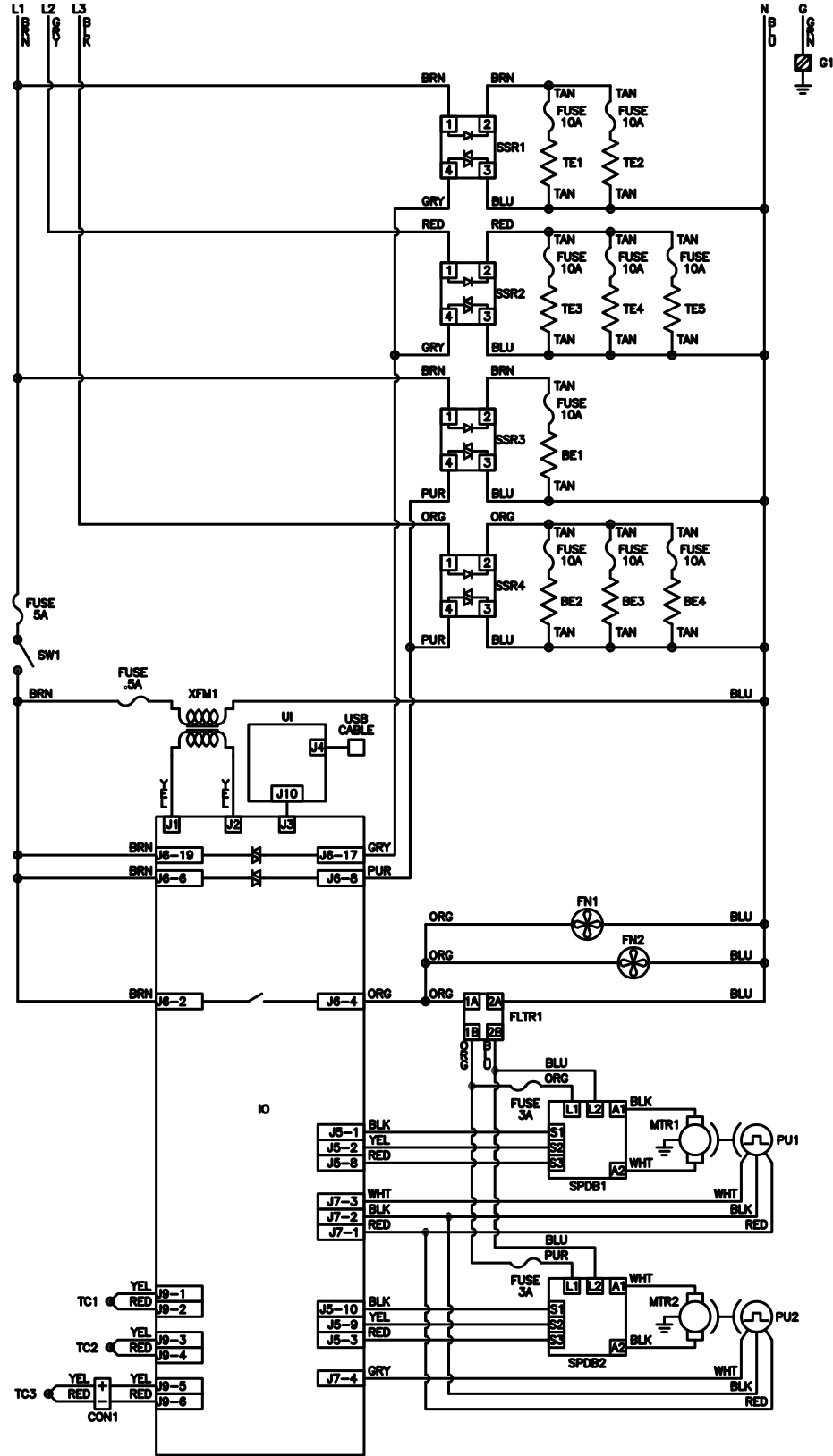
SIZE: A	ROUTE: ELECT	DWG. NO.: 167716	REV.: 6
SCALE: NTS	IMAGE MAY BE REDUCED NTS	CODE: DK8EP	



- POWER CORD:**
 CORD, 10/4 SOOW 600V 7FT LONG - #50158
 PLUG, NEMA 15-30P RIGHT ANGLE - #502340
- G1, GROUND LUG - #500283
- FUSE 15A, #502304
 FUSE 15A, #502304
 SSR1, SOLID STATE RELAY - #503834
 TE1, ELEMENT - #500049
 TE2, ELEMENT WITH CLIP - #166458
 TE3, ELEMENT - #500049
- FUSE 15A, #502304
 FUSE 15A, #502304
- UPPER ELEMENTS**
 TE1: FRONT ELEMENT
 TE3: BACK ELEMENT
- FUSE 15A, #502304
 SSR2, SOLID STATE RELAY - #503834
 TE4, ELEMENT - #500049
 TE5, ELEMENT - #500049
- FUSE 15A, #502304
- FUSE 15A, #502304
 SSR3, SOLID STATE RELAY - #504105
 BE1, ELEMENT - #500049
 BE2, ELEMENT WITH CLIP - #143957
- FUSE 15A, #502304
- LOWER ELEMENTS**
 BE1: FRONT ELEMENT
 BE4: BACK ELEMENT
- FUSE 15A, #502304
 SSR4, SOLID STATE RELAY - #504105
 BE3, ELEMENT - #500049
 BE4, ELEMENT - #500049
- FUSE 15A, #502304
- FUSE 10A - #502739
 FUSE 10A - #502739
- SW1, EMERGENCY SWITCH - #501864
- XF1, TRANSFORMER 24V - #502916
 FUSE .5A - #501139
 FUSE .5A - #501139
- UI, CONTROL TOUCHSCREEN:
 DK8-69DQ: 168291
 DK8-69ZXB: 173547
 USB CABLE - #504428
- IO, INPUT/OUTPUT BOARD - #504285
- FN1, FAN 230V WITH TERMINALS - #167146
 FN2, FAN 230V WITH TERMINALS - #167146
- FUSE 1.5A, #500061
 FUSE 1.5A, #500061
- LEFT BELT CONVEYOR**
 SPDB1, SPEED CONTROL BOARD - #141643
 MTR1, MOTOR - #500940
 PU1, PICK-UP - #501991
- FUSE 1.5A, #500061
 FUSE 1.5A, #500061
- RIGHT BELT CONVEYOR**
 SPDB2, SPEED CONTROL BOARD - #141643
 MTR2, MOTOR - #500940
 PU2, PICK-UP - #501991
- TC1, THERMOCOUPLE ZONE 1 - #502390
 TC2, THERMOCOUPLE ZONE 2 - #502390
 TC3, FOOD PROBE (OPTIONAL) - #504030
 CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

1. ADDED FUSES FOR SPDB2 P.W. 12/21/2015 2. REVISED & ADDED DK8-69ZXB S.A. 6/23/2017 3. P/N 173547 WAS FOR DK8-69DQ, FN1 & FN2 P/N WAS 144139 S.A. 1/9/2018	DRAWN BY: P.W. DATE: 12/15/2015	MARSHALL AIR SYSTEMS, INC.			
	GENERIC NAME: SCHEMATIC	SCHEMATIC, AUTOBROIL FR69B 208V 3PH DELTA WITH TOUCHSCREEN			
	PRODUCT LINE: FAB	PRODUCT CLASS: BRL	SIZE: A	ROUTE: ELECT	DWG. NO.: 169025
	MATERIAL: BRL	SCALE: " X "	IMAGE MAY BE REDUCED NTS NTS	CODE: DK8-69 SERIES	REV: 3

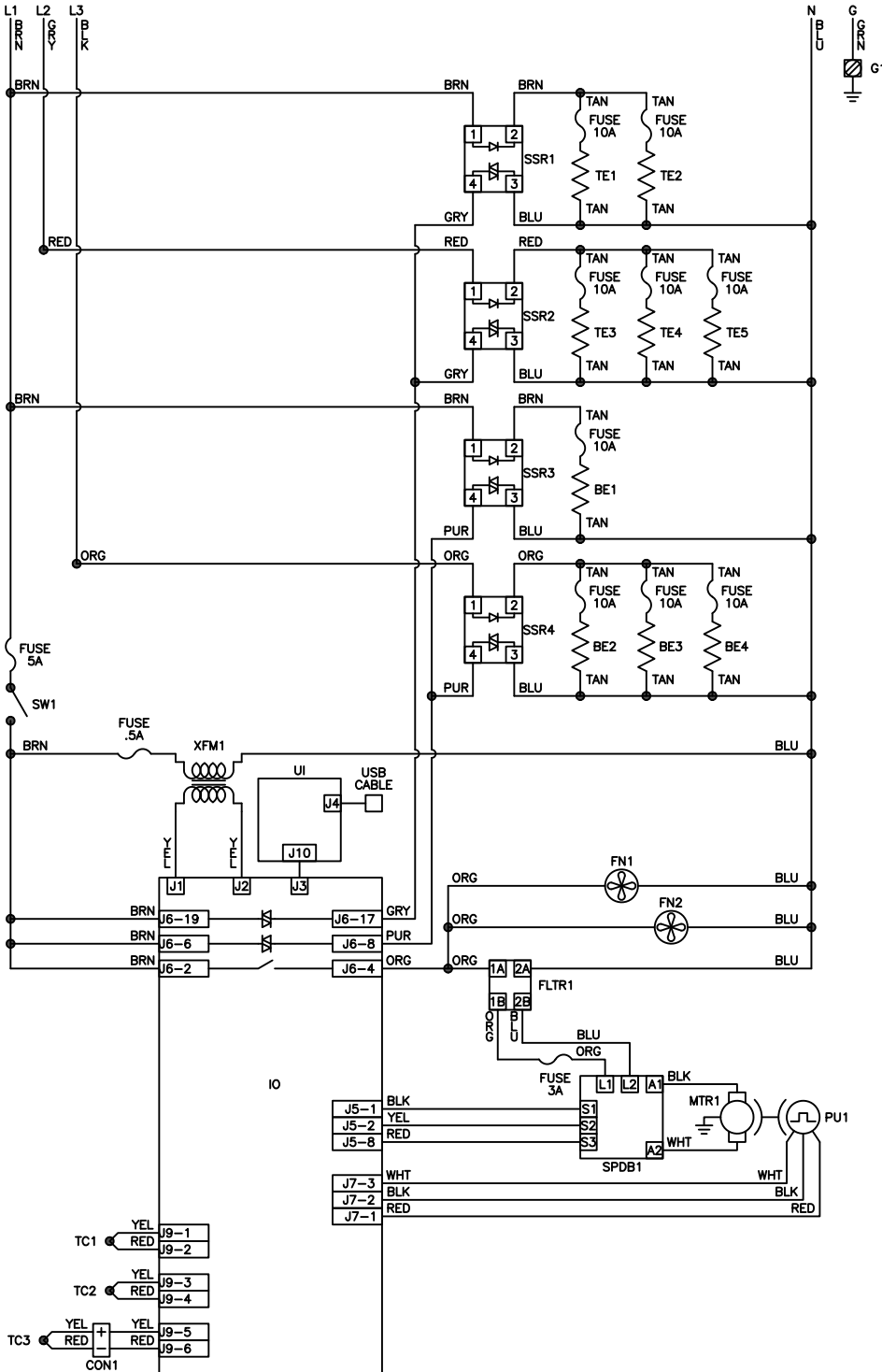
SUPPLY VOLTAGE:
220/240V (L-N) 3PH
50/60 HZ



- POWER CORD, 5 WIRES 7' LONG (NO PLUG) - #503504
- G1, GROUND LUG - #500293
- FUSE 10A, #502739
FUSE 10A, #502739
- SSR1, SOLID STATE RELAY - #503934
TE1, ELEMENT - #500049
TE2, ELEMENT WITH CLIP - #168458
- UPPER ELEMENTS
TE1: FRONT ELEMENT
TE2: BACK ELEMENT
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR2, SOLID STATE RELAY - #503934
TE3, ELEMENT - #500049
TE4, ELEMENT - #500049
TE5, ELEMENT - #500049
- FUSE 10A, #502739
- SSR3, SOLID STATE RELAY - #503934
BE1, ELEMENT - #500049
- LOWER ELEMENTS
BE1: FRONT ELEMENT
BE4: BACK ELEMENT
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR4, SOLID STATE RELAY - #503934
BE2, ELEMENT - #168458
BE3, ELEMENT - #500049
BE4, ELEMENT - #500049
- FUSE 5A, #503128
SW1, EMERGENCY SWITCH - #501864
FUSE .5A - #501139
XFM1, TRANSFORMER 24V - #502916
UI, TOUCHSCREEN USER INTERFACE - #168403
USB CABLE - #504428
- IO, INPUT/OUTPUT BOARD - #504285
- FN1, FAN 230V WITH TERMINALS - #167146
FN2, FAN 230V WITH TERMINALS - #167146
FLTR1, ELECTRICAL NOISE FILTER - #503574
- FUSE 1.5A, #500061
- SPBD1, SPEED CONTROL BOARD - #141643
MTR1, MOTOR - #500940
PU1, PICK-UP - #501991
- LEFT BELT CONVEYOR
- FUSE 1.5A, #500061
- SPBD2, SPEED CONTROL BOARD - #141643
MTR2, MOTOR - #500940
PU2, PICK-UP - #501991
- RIGHT BELT CONVEYOR
- TC1, THERMOCOUPLE ZONE 1 (TO ELEMENT TE2) - #502390
TC2, THERMOCOUPLE ZONE 2 (TO ELEMENT BE2) - #502390
TC3, FOOD PROBE (OPTIONAL) - #504030
CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

J. FN1 & FN2 P/N WAS 144139 S.A. 1/10/2018		DRAWN BY: S.A.	DATE: 2/10/2016	MARSHALL AIR SYSTEMS, INC.			
GENERIC NAME: SCHEMATIC		PRODUCT CLASS: BRL					
PRODUCT LINE: FAB		MATERIAL: REFERENCE		415/220-380/220V 3PH WYE WITH TOUCHSCREEN			
SCALE: " X "		SIZE: A	ROUTE: ELECT	DWG. NO.: 169254	REV.: 1	CODE: DK8-69INTLCE	
SCALE: NTS		IMAGE MAY BE REDUCED NTS		CODE: DK8-69INTLCE			

SUPPLY VOLTAGE:
220-240/380-415V 3PH
50/60 HZ



- POWER CORD, 5 WIRES 7' LONG (NO PLUG) - #503504
- G1, GROUND LUG - #500293
- FUSE 10A, #502739
FUSE 10A, #502739
- SSR1, SOLID STATE RELAY - #503934
TE1, ELEMENT - #500049
TE2, ELEMENT WITH CLIP - #166458
- UPPER ELEMENTS
TE1: FRONT ELEMENT
TE5: BACK ELEMENT
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR2, SOLID STATE RELAY - #503934
TE3, ELEMENT - #500049
TE4, ELEMENT - #500049
TE5, ELEMENT - #500049
- FUSE 10A, #502739
- SSR3, SOLID STATE RELAY - #503934
BE1, ELEMENT - #500049
- LOWER ELEMENTS
BE1: FRONT ELEMENT
BE4: BACK ELEMENT
- FUSE 10A, #502739
FUSE 10A, #502739
FUSE 10A, #502739
SSR4, SOLID STATE RELAY - #503934
BE2, ELEMENT - #166458
BE3, ELEMENT - #500049
BE4, ELEMENT - #500049
- FUSE 5A, #503128
SW1, EMERGENCY SWITCH - #501864
FUSE .5A - #501139
XFM1, TRANSFORMER 24V - #502916
UI, TOUCHSCREEN USER INTERFACE - #172127
USB CABLE - #504428
- FN1, FAN 230V WITH TERMINALS - #167146
FN2, FAN 230V WITH TERMINALS - #167146
- FLTR1, ELECTRICAL NOISE FILTER - #503574
IO, INPUT/OUTPUT BOARD - #504285
- FUSE 1.5A, #500061
- SPBD1, SPEED CONTROL BOARD - #141643
MTR1, MOTOR - #500940
PU1, PICK-UP - #501991
- TC1, THERMOCOUPLE ZONE 1 (TO ELEMENT TE2) - #502390
TC2, THERMOCOUPLE ZONE 2 (TO ELEMENT BE2) - #502390
TC3, FOOD PROBE (OPTIONAL) - #504030
CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

FN1 & FN2 P/N WAS 144139
S.A. 1/10/2018

DRAWN BY: S.A. DATE: 4/17/2017

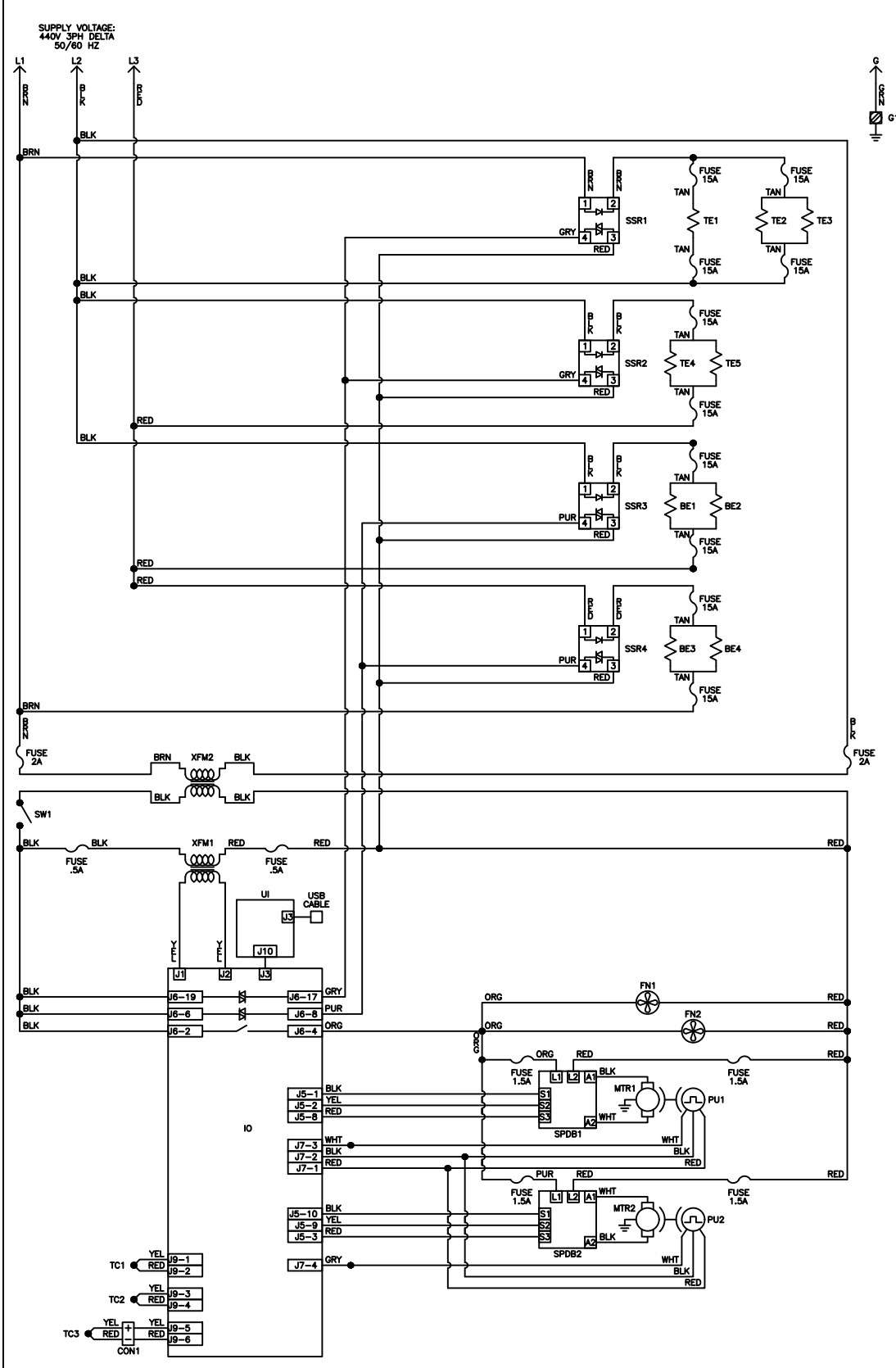
MARSHALL AIR SYSTEMS, INC.

GENERIC NAME: SCHEMATIC
PRODUCT LINE: FAB PRODUCT CLASS: BRL
MATERIAL: REFERENCE

SCHEMATIC, AUTOBROIL FR15B
415/240-381/220V 3PH WYE WITH TOUCHSCREEN

SIZE: A ROUTE: ELECT DWG. NO.: 169281 REV.: 1

SCALE: NTS IMAGE MAY BE REDUCED CODE: DK8INTLCE



- POWER CORD:**
CORD, 10/4 SOOW 600V 7FT LONG - 182597
- G1, GROUND LUG - #500293
- FUSE 6A, - #504724
FUSE 6A, - #504724
SSR1, SOLID STATE RELAY - #504728
TE1, ELEMENT - #504719
TE2, ELEMENT WITH CLIP - #181908
TE3, ELEMENT - #504719
- FUSE 6A, - #504724
FUSE 6A, - #504724
- UPPER ELEMENTS**
TE1: FRONT ELEMENT
TE3: BACK ELEMENT
- FUSE 6A, - #504724
SSR2, SOLID STATE RELAY - #504728
TE4, ELEMENT - #504719
TE5, ELEMENT - #504719
- FUSE 6A, - #504724
- FUSE 6A, - #504724
SSR3, SOLID STATE RELAY - #504728
BE1, ELEMENT - #504719
BE2, ELEMENT WITH CLIP - #181908
- FUSE 6A, - #504724
- LOWER ELEMENTS**
BE1: FRONT ELEMENT
BE4: BACK ELEMENT
- FUSE 6A, - #504724
SSR4, SOLID STATE RELAY - #504728
BE3, ELEMENT - #504719
BE4, ELEMENT - #504719
- FUSE 6A, - #504724
- FUSE 2A - #504722
FUSE 2A - #504722
XFM2, TRANSFORMER 440V PRI, 220 SEC - #504727
- SW1, EMERGENCY SWITCH - #501864
- XFM1, TRANSFORMER 24V - #502916
FUSE .5A - #501139
FUSE .5A - #501139
- UI, CONTROL TOUCHSCREEN - #182595
- USB CABLE - #504428
- IO, INPUT/OUTPUT BOARD - #504285
- FN1, FAN 230V WITH TERMINALS - #167146
FN2, FAN 230V WITH TERMINALS - #167146
- FUSE 1.5A, #500061
FUSE 1.5A, #500061
- LEFT BELT CONVEYOR**
SPDB1, SPEED CONTROL BOARD - #141643
MTR1, MOTOR - #500940
PU1, PICK-UP - #501991
- FUSE 1.5A, #500061
FUSE 1.5A, #500061
- RIGHT BELT CONVEYOR**
SPDB2, SPEED CONTROL BOARD - #141643
MTR2, MOTOR - #500940
PU2, PICK-UP - #501991
- TC1, THERMOCOUPLE ZONE 1 - #504474
TC2, THERMOCOUPLE ZONE 2 - #504474
TC3, FOOD PROBE (OPTIONAL) - #504030
CON1, CONNECTOR THERMOCOUPLE (OPTIONAL) - #503820

DRAWN BY: S.A.	DATE: 2/26/2020
GENERIC NAME: SCHEMATIC	
PRODUCT LINE: FAB	PRODUCT CLASS: BRL
MATERIAL: REFERENCE	
" X " SCALE: NTS	

MARSHALL AIR SYSTEMS, INC.			
SCHEMATIC, AUTOBROIL FR69B 440V 3PH DELTA WITH TOUCHSCREEN			
SIZE: A	ROUTE: ELECT	DWG. NO.: 182589	REV.: 0
SCALE: NTS		IMAGE MAY BE REDUCED	CODE: DK8-69R440VCE