This document contains the installation and operating instructions for:

MODEL: FR15BS AUTOBROIL™

FOR YOUR SAFETY

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

INSTRUCTIONS TO PURCHASER:

1. THIS MANUAL NEEDS TO BE RETAINED FOR FUTURE REFERENCE.

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.

118719 RV111798

MODEL: FR15BS AUTOBROIL™

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I. MACHINE SETTINGS

MODEL: FR15BS AUTOBROIL™

SERIAL NUMBER: _____

VOLTAGE: _____

SPEED SELECTOR SETTING: _____

PASS-THRU TIME: _____

BROILER HIGH/LOW TEMPERATURE SETTING: _____

START-UP TECHNICIAN: _____

START-UP DATE: _____

COMMENTS: _____

_____

_____

118719 RV111798

II. MACHINE INSTALLATION

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 sideskins 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.

APPLIANCE LOCATION

1. Position Autobroil™ to properly align with exhaust hood. Note name plate clearance.

2. The hood/ventilator for the appliance 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" from sides and 6" 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' clear from all construction.

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 and the National Electrical Code. A grounding lug is attached inside the control cabinet. Safety precautions dictate this lug be used.

2. On a new electrical service **- MAKE CERTAIN THAT VOLTAGE IS WITHIN 1**0% **OF THE UNIT'S RATED VOLTAGE AND THAT THE NEUTRAL IS IN FACT NEUTRAL. SERIOUS DAMAGE WILL OCCUR BY HAVING VOLTAGE ON THE NEUTRAL.** Appliance should be protected by a properly sized circuit breaker furnished from the main building circuit panel.

3. There is an Electrical Schematic located in the Owner's Manual and also inside the electrical cabinet of the machine.

III. OPERATING INSTRUCTIONS

PRE-OPERATION CHECK

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

1. Check that no "binding" and resultant conveyor overloading is present. With the electrical connections complete and with the electrical cabinet door secured shut, set the forward switch "ON" for the conveyors. Adjust the speed control for mid-point speed. The conveyor should move forward in smooth unaltered motion. Shut down immediately if there is any evidence of "binding" or other mechanical blockage.

2. Proper conveyor operation is when the amperage draw in the white or black motor lead from the circuit board (Figure 4) 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.**

3. 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 4) that drive the various axles and reposition them by 1/32" until the conveyor tightness is eliminated. Twenty-five inch pounds of torque is required to drive a properly set up conveyor.

4. After the conveyor checkout is complete, turn on the heat switch. All heater elements should glow red except for one top element. After the unit is up to temperature, this one element will cycle. For trouble shooting problems, see Section V. **CAUTION: NEVER RUN HEAT WITHOUT CONVEYOR ON.**

5. 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.

BROILER ADJUSTMENT

The Autobroil™ requires 20 to 30 minutes to reach stable temperature. After this time lapse, the conveyor speed can be set to properly cook the product.

SETTING TEMPERATURE CONTROLLER FOR PROPER HIGH/LOW OPERATION-WEEKLY

1. Follow the procedure below in order to set temperature control for 700°F (371 °C). After doing this, turn on the broiler.

2. Observe the temperature displayed: push "SET" and release to view the "SET POINT." To change set point push "SET" and, within three seconds, use the arrows to select a new set point. When setting the High/Low for proper operation, make the set point 700°F (371 °C). Press the set button again to make the change permanent. Broiler High/Low control is now set.

3. Place one meat patty on the broiler chain. Based on the appearance of the broiled patty, reset the Digital Speed Control for the desired broiling quality. (Note: This single patty should be cooked to the maximum degree of the Minimum/Maximum doneness tolerance.)

NOTE: THE HIGHER THE NUMERICAL VALUE SET ON THE DIGITAL SPEED CONTROL, THE FASTER THE CONVEYOR CHAIN WILL RUN.

IV. SCHEDULED MAINTENANCE

DAILY CLEANING PROCEDURES

CAUTION: **UNDER NO CIRCUMSTANCES SHOULD OVEN CLEANER EVER BE USED ON THIS APPLIANCE. CAUSTIC FUMES CAUSE ELECTRICAL COMPONENT DAMAGE AND WILL CAUSE MANY OTHER PROBLEMS IF USED TO CLEAN THIS BROILER. SEE** FIGURES 2**,** 3**, AND** 5 **FOR CLEANING.**

1. Scrape axles to remove daily grease buildup.
2. Remove the top heat shield (Figure 2) located above the meat conveyor and clean with wire brush.
3. Remove the meat stripper and wash with hot soapy water.
4. Wire brush the broiler conveyor and wipe with damp cloth.
5. Turn off the conveyor and remove the grease pan, product slide, product slide pan, meat stripper, and conveyor wiper; clean with hot soapy water.
6. Remove the lower reflector, conveyor arm cover, and front deflector; clean with hot soapy water.
7. 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 a tool such as a screwdriver.
8. Additional cleaning should exhibit good housekeeping and entail a general wiping of all exterior surfaces. DO NOT GET WATER ON THE ELECTRICAL CABINET OR THE HEATING ELEMENTS. NEVER HOSE THE MACHINE.

Monthly Cleaning Procedures

1. 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 cutlinks. 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. (See Figure 5 for cutlink illustration.) Make certain conveyors are reinstalled going in the correct direction. **PLACING CHAIN ON BACKWARDS WILL CAUSE SEVERE BINDING PROBLEMS.**

PREVENTIVE MAINTENANCE

Once Every Three Months

1. Lubricate the roller chain with a few drops of the oil.
2. Inspect all motor brushes and replace if less than 1/4" is left.
3. **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 other electrical connections are still tight.
4. **INVENTORY THE SPARE PARTS KIT AND ORDER MISSING PARTS AS NEEDED. KEEP A COMPLETE SET OF PARTS ON HAND AT ALL TIMES.**

V. TROUBLESHOOTING

This section contains a list of imagined 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.**

1. MACHINE HAS POWER BUT ELEMENTS ARE OUT.

POSSIBLE CAUSE

A) Check to make sure broiler on-off switch is in **"ON"** position and that the right voltage is coming out of switch (see Electrical Schematic).

B) Check that heat switch is in **ON** position.

C) Check that power is passing to and through the large mercury relay.

D) Check wiring to individual elements.

E) Check fuses to each element.

F) Check elements.

2. CONVEYOR WILL NOT RUN.

POSSIBLE CAUSE:

A) Check rocker switch to make sure power is flowing through switch.

B) Check fuse in control wiring in electrical cabinet.

C) Make certain the conveyor is not mechanically jammed. The speed control will allow the motor to stall until the binding or jamming is removed.

D) Check that set screws are tight in roller chain drive sprockets (Figure 4).

E) If everything works up to this point, unplug the motor cord from the speed control and plug it into a spare speed control. If the motor works, there is a failed speed control board (Figure 4). If it does not work, then the motor has failed.

3. MECHANICAL BINDING

POSSIBLE CAUSE:

A) Check roller chain tension for proper adjustment. Adjust motor if chain is too tight.

B) Inspect conveyor chain closely for bent or warped links that may be hanging up and causing a binding condition. Also check that the chain links are not climbing out of the sprockets as the conveyor rotates. If they are, then loosen conveyor sprockets and reposition.

C) Make sure the axle assembly is clean and free of grease and food residue to allow smooth movement of the conveyor.

D) Check the axle assembly to make certain all set screws, bearings, etc. are properly positioned and secure.

E) Check that meat stripper is installed and positioned correctly (Figure 6).

F) Disassemble conveyor axle assembly and check condition of teflon bearing for excessive wear.

G) Visually inspect the motor drive chain assembly (Figure 3) for smooth rotation of chain and make certain there is not binding or worn components.

4. THERE IS NO SPEED CONTROL ON THE CONVEYOR.

POSSIBLE CAUSE:

A) Attach the wires from the board (Figure 4) with no control into a spare circuit board. If there is still no control, the potentiometer (Figure 4) for that conveyor has failed.

B) If attaching to the spare board makes it work, the circuit board has failed.

C) If neither of the above works, then the motor has failed.

5. MEAT DOES NOT COOK COMPLETELY.

POSSIBLE CAUSE:

A) Check to make sure tube bundle is clean.

B) Check to make sure the heat shield is installed (Figure 2).

C) Check to make sure all elements are working.

D) Check the speed of the conveyor.

E) Check refrigeration. Holding temperature of meat may be lower than 0°F.

F) Check for excessive exhaust by momentarily turning exhaust fan off.

G) Check setting on temperature controller

6. CANNOT MAINTAIN CONSISTENT DEGREE MEAT COOKING.

POSSIBLE CAUSE:

A) Check that tube bundles are being cleaned in accordance with Item 7 in Section IV.

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.

C) Meat of different temperatures is being used. (Frozen vs. partially thawed.)

D) Check for excessive exhaust by momentarily turning off exhaust fan.

E) Check to make sure the heat shield is installed (Figure 2).

7. MEAT OVERCOOKED ON OUTSIDE AND UNDERCOOKED ON INSIDE.

POSSIBLE CAUSE:

A) Check refrigeration. Holding temperature of meat may be lower than 0°F.

B) Check that tube bundles are being cleaned in accordance with Item 7 in Section IV.

8. MEAT NOT SLIDING INTO HAMBURGER CATCH AREA.

POSSIBLE CAUSE:

A) Meat stripper (Figure 3) needs cleaning.

B) Meat stripper needs adjustment (Figure 6).

C) Product slide (Figure 2) not installed properly.

D) No teflon sheet installed (Figure 2).

VI. 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.

PART#	DESCRIPTION	QUANTITY PER UNIT	LOCATION
101037	Bundle Tube	1	Figure 2
101042	Conveyor Idler W/Meldin Bearing	2	Figure 3
101043	Conveyor Sprocket	2	Figure 3
101044	Conveyor Bearing	2	Figure 3
101363	Axle Scraper	1	Figure 5
104679	Link Cut Conveyor 15"	1	Figure 5
110042	Fan	1	Figure 4
115682	Conveyor Wiper Assembly	1	Figure 3
117228	Control Guard	1	Figure 4
117262	Product Slide Pan	1	Figure 2
117270	Thermocouple Wire Chase	1	Figure 4
117272	Product Slide Assembly with Teflon Sheet	1	Figure 2

117277	Conveyor Arm Cover	1	Figure 2
117285	Temperature Controller	1	Figure 4
117288	Teflon Sheet	1	Figure 2
117289	Reflector-Lower	1	Figure 2
117290	Heat Shield (Top)	1	Figure 2
118266	Deflector-Front	1	Figure 2
118527	Temperature Controller (CE ONLY)	1	Figure 4
118719	Owner's Manual FR15BS	1	N/A
118730	Vented Panel-Side Cover	2	Figure 2
118734	Spare Parts Kit 208V	1	N/A
118735	Spare Parts Kit 240V	1	N/A
120792	Product Slide without Teflon Sheet	1	Figure 2
120106	Front Deflector	1	Figure 2
121373	Heat Guard	1	Figure 2
123781	Meat Stripper	1	Figure 3, 6
130657	Kit, Motor Reversing	1	N/A
500010	Cable Ties	N/A	N/A
500026	Conveyor 15"	37.250" lg	N/A
500033	Conveyor Chain Pliers	1	N/A
500035	Roller Chain #35 Riveted (Per Link)	35"	Figure 3
500037	Sprocket Drive 3518 x 1/2" (conveyor)	1	Figure 3
500040	Sprocket Drive 3510 x 1/2" (motor)	1	Figure 3
500046	Elements-Broiler 895W for 120V *	9	Figure 4
500048	Elements-Broiler 895W for 240V *	9	Figure 4
500049	Elements-Broiler 895W for 220V *	9	Figure 4
500064	Fuse, Non 15 Amp	9	Figure 4
500065	Fuse Block 3-Pole	3	Figure 4
500067	Fuse Block (1-Pole)	1	Figure 4

500068	Fuse Holder	1	Figure 4
500083	Offset Link (Roller Chain)	1	N/A
500092	Master Link (Roller Chain)	1	Figure 3
500112	Digital Potentiometer	1	Figure 4
500204	Terminal Block (3-Pole)	1	Figure 4
500333	Fuse 2 Amp AGC	1	Figure 4
500334	Fuse, AGC 3 Amp	1	Figure 4
500518	1/4" Set Collar	2	Figure 4
500588	Terminal Block (4-Pole)	1	Figure 4
500589	Thermocouple Fitting	1	Figure 4
500732	Ground Lug	1	Figure 4
500935	Fuse, Non 5 Amp	1	Figure 4
500940	Motor	1	Figure 4
500941	Motor Brush for Motor ASPEC 29894G	2	Figure 4
500966	Terminal Strip 8-Pole	1	Figure 4
501624	Circuit Board #MM23011 C SPEC #185B	1	Schematic
501810	Mercury Relay, 120V Coil, 2-Pole	1	Figure 4
501835	Grease Pan	1	Figure 1
501864	Rocker Switch	2	Figure 4
501958	Transformer 240V to 120V (International) *	1	Figure 4
501971	Relay, 1-Pole 20A, 120V Coil	1	Figure 4
501999	Mercury Relay 240V Coil, 2-Pole (International)	1	Figure 4
502168	Transformer 240V to 12V (International) *	1	Figure 4
502197	Thermocouple	1	Figure 4
502248	Transformer 120V to 12V *	1	Figure 4
502625	Relay, 1-Pole 20A, 240V Coil	1	Figure 4
502630	Mercury Relay, 240V Coil, 3-Pole	1	Figure 4
502892	Rotary Speed Selector	1	Figure 4

503092	Transformer (CE Only)	1	Figure 4
503099	Fuse Holder (CE Only)	1	Figure 4
503104	Fan (CE Only)	1	Figure 4
503193	Fuse (CE Only)	1	Figure 4
503287	Brush Motor for Motor AType 24Y2FETM-D4"	2	N/A
503460	Cord 6/3 SO (CE Only)	1	Figure 4
503503	Kit, Control Temp. Faceplate REF: 132575	1	N/A
503574	Line Filter	1	Schematic
503575	Line Filter	1	schematic

* Customer must look at Electrical Schematic to determine which part is needed when ordering replacements.

BROILER LIMITED WARRANTY

MARSHALL AIR SYSTEMS, INC., ("Marshall") warrants to the first purchaser ("Purchaser") all new equipment of its manufacture to be free of defects in material and factory workmanship for a period of one year" from date of shipment provided that (i) the equipment is installed in the Continental United States, Canada or Hawaii and operated according to the Owner's Manual while located at the original address of installation, (ii) the warranty registration card has been completed and returned to the factory within fifteen (15) days after installation, and (iii) a post-installation start-up has been performed by an authorized service representative (portable equipment not applicable). Marshall's obligation under this warranty is limited to the repair or replacement at its option of any defective part. Under certain circumstances, Marshall will reimburse Purchaser for limited labor costs in replacing parts during a period of not more than ninety (90) days after date of shipment, provided that Labor Reimbursement instructions are followed and items i, ii, and iii above are completed. See special provision for portable equipment. It is understood that Marshall's obligation with respect to equipment located outside the Continental United States, Canada or Hawaii is limited to replacement parts only.

*The following broiler parts have a six month part warranty:

- Burner Shields and Screens
- Burner Grids
- Burner Gaskets
- Electric Broiler Elements
- Flame Runners

Because Marshall does not and cannot control Purchaser's installation, use, and maintenance of equipment manufactured by Marshall, this warranty DOES NOT COVER:

Any equipment calibration;

Any component disassembled in the field;

Damage due to improper cleaning and/or abuse, i.e.. burner rotation, grease accumulation in electrical components or plugs (hosing or "watering down" equipment will cause electrical failures not covered by warranty);

Blown fuses or bulbs, motor brushes and Teflon components;

Any replacement parts used on the equipment which are not purchased from Marshall;

Accessory components not installed or manufactured by Marshall.

Shipping damage must be reported to the carrier and is not covered under this warranty. Marshall will not be liable for damage as a result of improper installation, misuse, abuse, alteration of original design, incorrect voltage, unauthorized service, breakage of fragile items, or any other damage caused by an act out of Marshall's control.

The affect of corrosion, fire, and normal wear on the equipment or component parts is not covered by this warranty. This warranty does not cover cooking performance, smoke capture or holding temperatures which is a function of food types, textures, temperatures, equipment line ups and other variables chosen by the Purchaser and over which Marshall has no control. This warranty does not apply to damage caused by accident or to damage caused by the negligence of Purchaser or the employees of Purchaser or to damage caused by lightning generated electrical current or any other Act of God whatsoever. This warranty does not apply to any equipment bearing a serial number which has been tampered with or altered. Marshall reserves the right to accept or reject any such claim in whole or in part. Marshall will not accept the return of any product without prior written approval from Marshall, and all such approved returns shall be made at Purchaser's sole expense.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT INFRINGEMENT, AND EXCEPT FOR THE EXPRESS WARRANTY CONTAINED HEREIN, THE EQUIPMENT IS SOLD "AS IS." REMEDIES UNDER THIS WARRANTY AND UNDER ANY WARRANTY THAT MAY SURVIVE THE DISCLAIMER OF WARRANTIES ARE LIMITED EXCLUSIVELY TO THOSE REMEDIES DESCRIBED ABOVE. NO OTHER REMEDY IS AVAILABLE UNDER THIS WARRANTY OR ANY OTHER WARRANTY. NEITHER THIS WARRANTY NOR ANY OTHER WARRANTY COVERS, AND MARSHALL WILL NOT BE RESPONSIBLE FOR, ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO THE COST OF DISASSEMBLY AND SHIPMENT OF THE EQUIPMENT, PRODUCTION OR PRODUCT LOSSES, INJURY TO OTHER PROPERTY, OR LOST PROFITS RESULTING FROM THE USE OF OR INABILITY TO USE THE PRODUCTS OR FROM THE PRODUCTS BEING INCORPORATED IN OR BECOMING A COMPONENT OF ANY OTHER PRODUCT OR GOODS, OR OTHER LOSSES. WHERE, DUE TO OPERATION OF LAW, CONSEQUENTIAL AND INCIDENTAL DAMAGES CANNOT BE EXCLUDED, THEY ARE EXPRESSLY LIMITED IN AMOUNT TO THE PURCHASE PRICE OF THE EQUIPMENT.

FOR INTERNATIONAL INSTALLATIONS -- PLEASE CONTACT YOUR LOCAL MARSHALL AIR SYSTEMS RECOGNIZED DISTRIBUTOR.

BROILER WARRANTY PROCEDURES

RETURN GOODS AUTHORIZATION FOR PARTS - FACTORY DIRECT

For prompt warranty parts replacement and RGA processing, please call Marshall's Customer Service Department at 800-722-3474 or 704-525-6230 for assistance. In all cases, a Return Goods Authorization (RGA) number must be issued by Marshall Air Systems, Inc. Unauthorized returns will not be processed.

Option #1: Purchaser to return part prepaid to Factory, Marshal! to repair or replace at own expense if defective, and ship part back to Purchaser prepaid.

Option #*2:* Marshall to furnish replacement part freight prepaid with or without requesting return of the defective part.

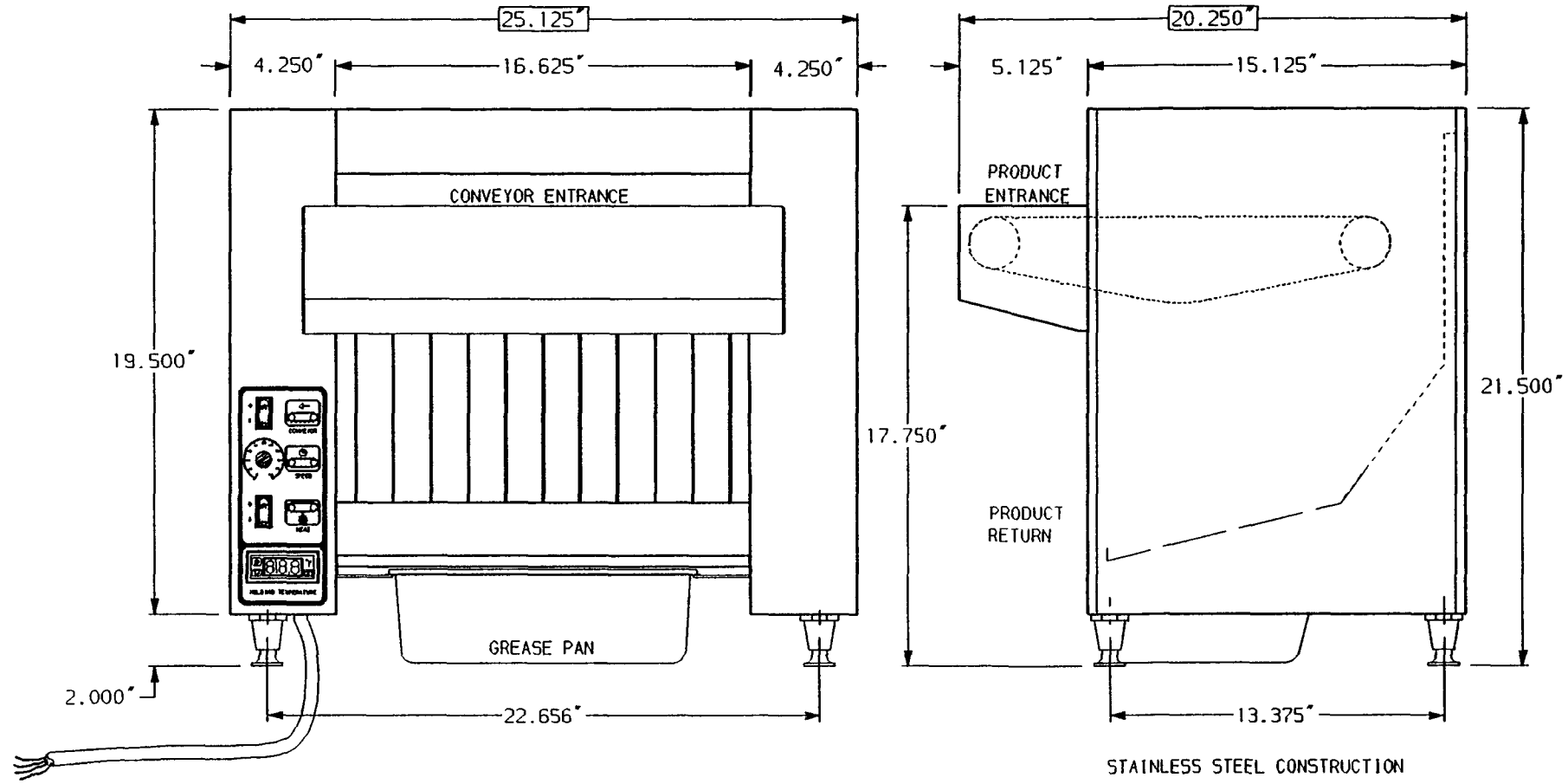
WARRANTY LABOR REIMBURSEMENT AND/OR PARTS REPLACEMENT THROUGH RECOGNIZED MAINTENANCE & REPAIR CENTERS

Normally, labor will be covered under the start up fee. In the unlikely event this does not apply, consult Marshall Air Systems, Inc. To be reimbursed for warranty labor costs, authorization must be given by Marshall Air Systems, Inc. Unauthorized work will not be reimbursed. Work must be performed by a Marshall Air Systems Recognized Service Agency within the service time allowance guidelines and must be submitted along with failed parts (if applicable) to Marshall Air Systems (freight prepaid) within 30 days of the work being performed. Travel is covered, but must not exceed 50 miles or 1 hour, whichever is greater. Call Marshall's Service Department at 800-722-3474 or 704-525-6230 with any questions. Service is to be performed by recognized service agencies during normal working hours. Owner to pay for all other charges including excessive travel or overtime charges. **DIAGNOSTIC LABOR CHARGES ARE INCLUDED IN SERVICE TIME ALLOWANCE GUIDELINES.** All portable equipment (under 90 pounds) shall be delivered by Purchaser, at his/her expense, to the nearest authorized service agency for in-shop repair or at purchasers discretion he/she will pay all travel time and mileage expenses for portable equipment.

NON-WARRANTY RETURNS:

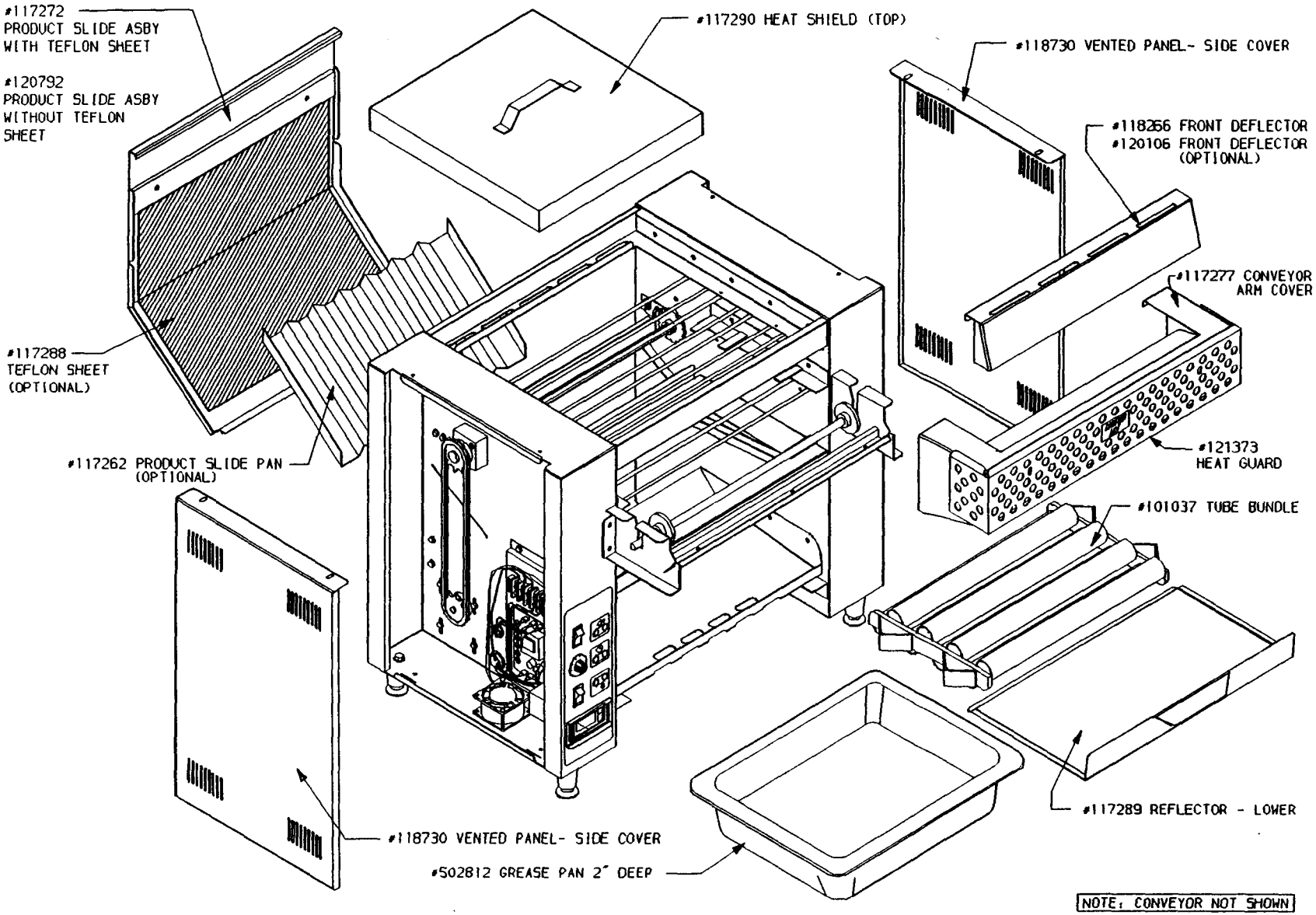
All items returned for customer convenience are subject to a 20% restocking fee. In the event of an error by Marshall Air Systems, Inc., a Returned Goods Authorization will be issued for full credit.

FOR INTERNATIONAL INSTALLATIONS -- PLEASE CONTACT YOUR LOCAL MARSHALL AIR SYSTEMS RECOGNIZED DISTRIBUTOR.



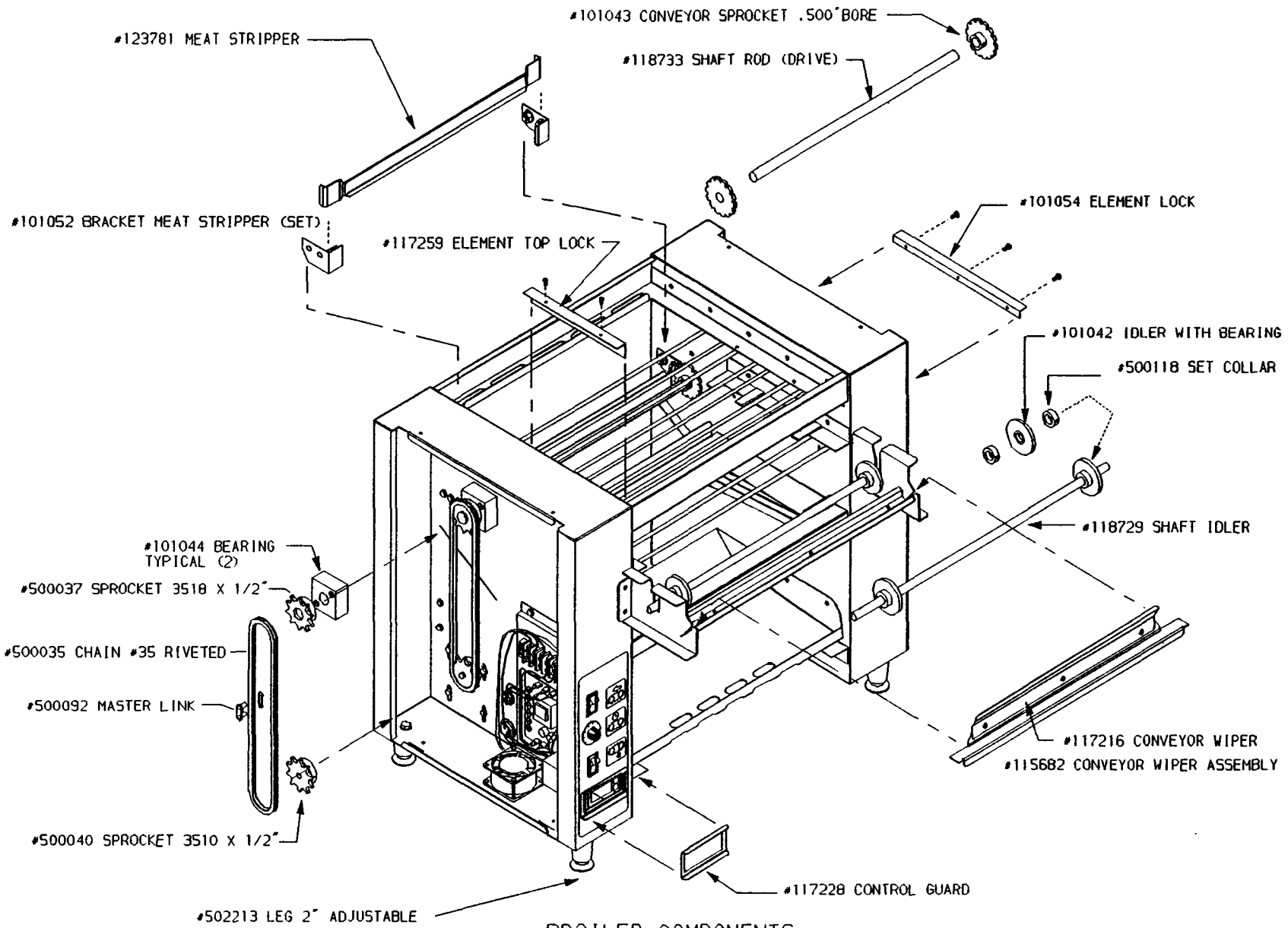
MODEL FR15BS

FIGURE 1



BROILER PANS AND COVERS

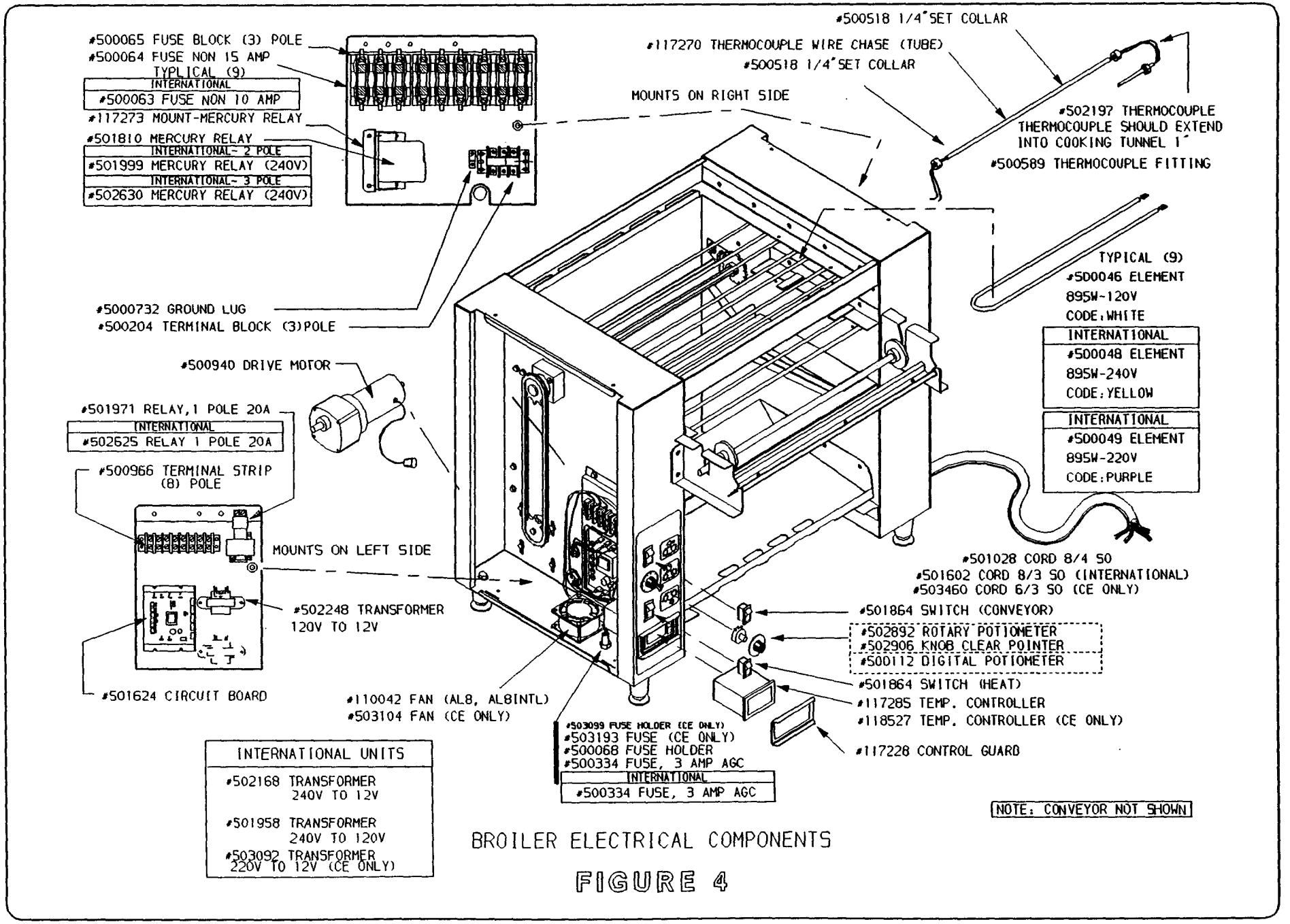
FIGURE 2



BROILER COMPONENTS

FIGURE 3

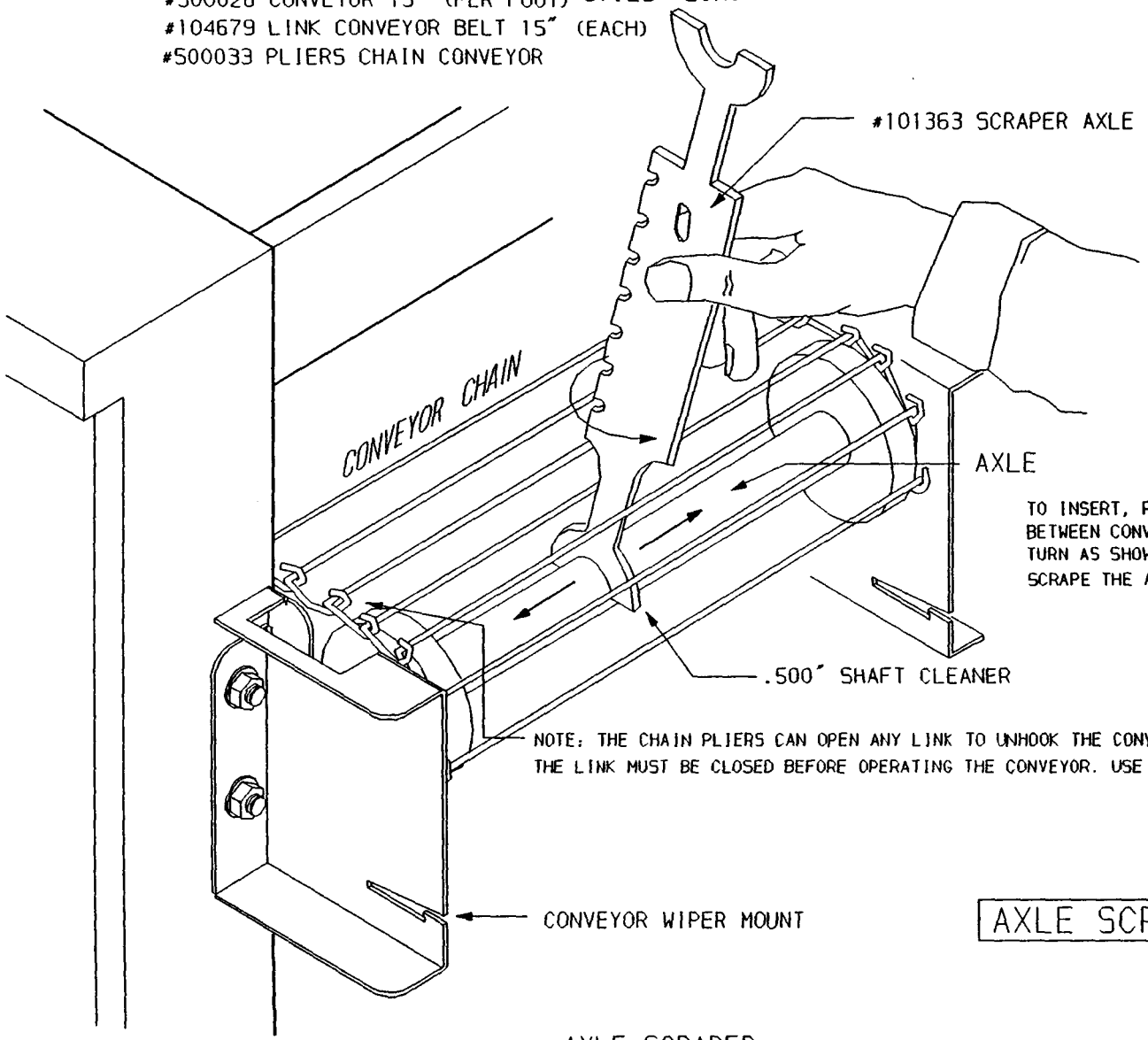
NOTE: CONVEYOR NOT SHOWN



BROILER ELECTRICAL COMPONENTS

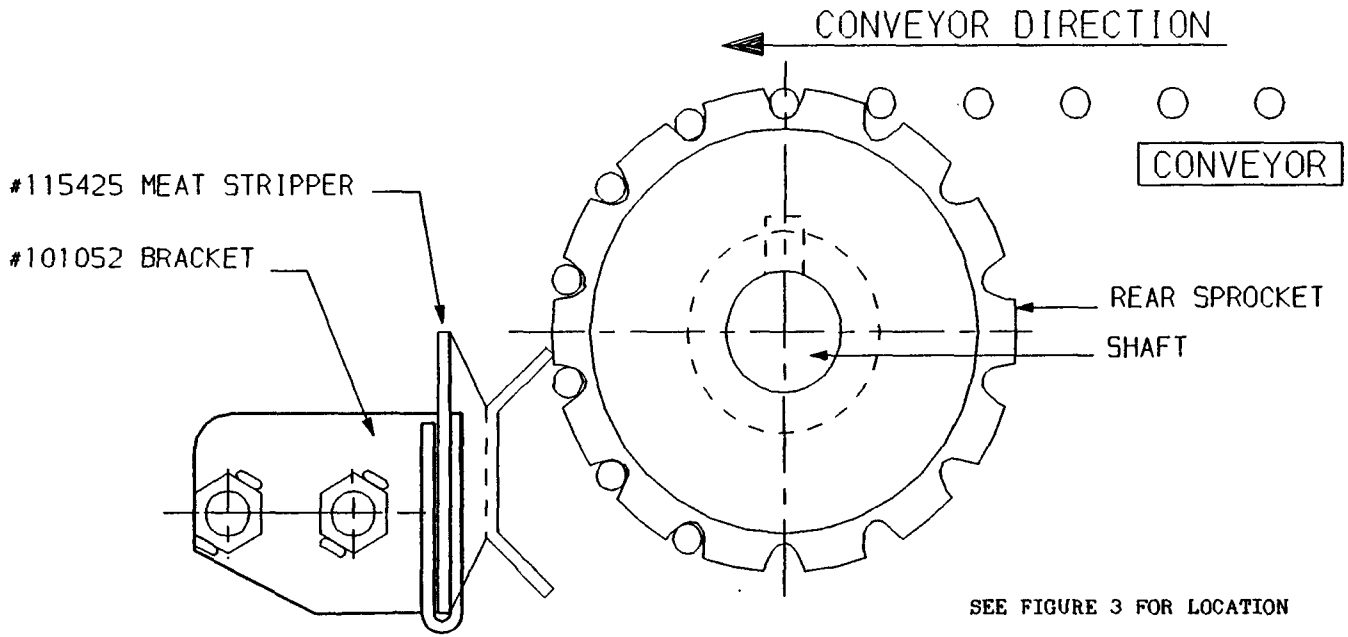
FIGURE 4

#500026 CONVEYOR 15' (PER FOOT) 37.25" LONG
#104679 LINK CONVEYOR BELT 15" (EACH)
#500033 PLIERS CHAIN CONVEYOR



AXLE SCRAPER

FIGURE 5

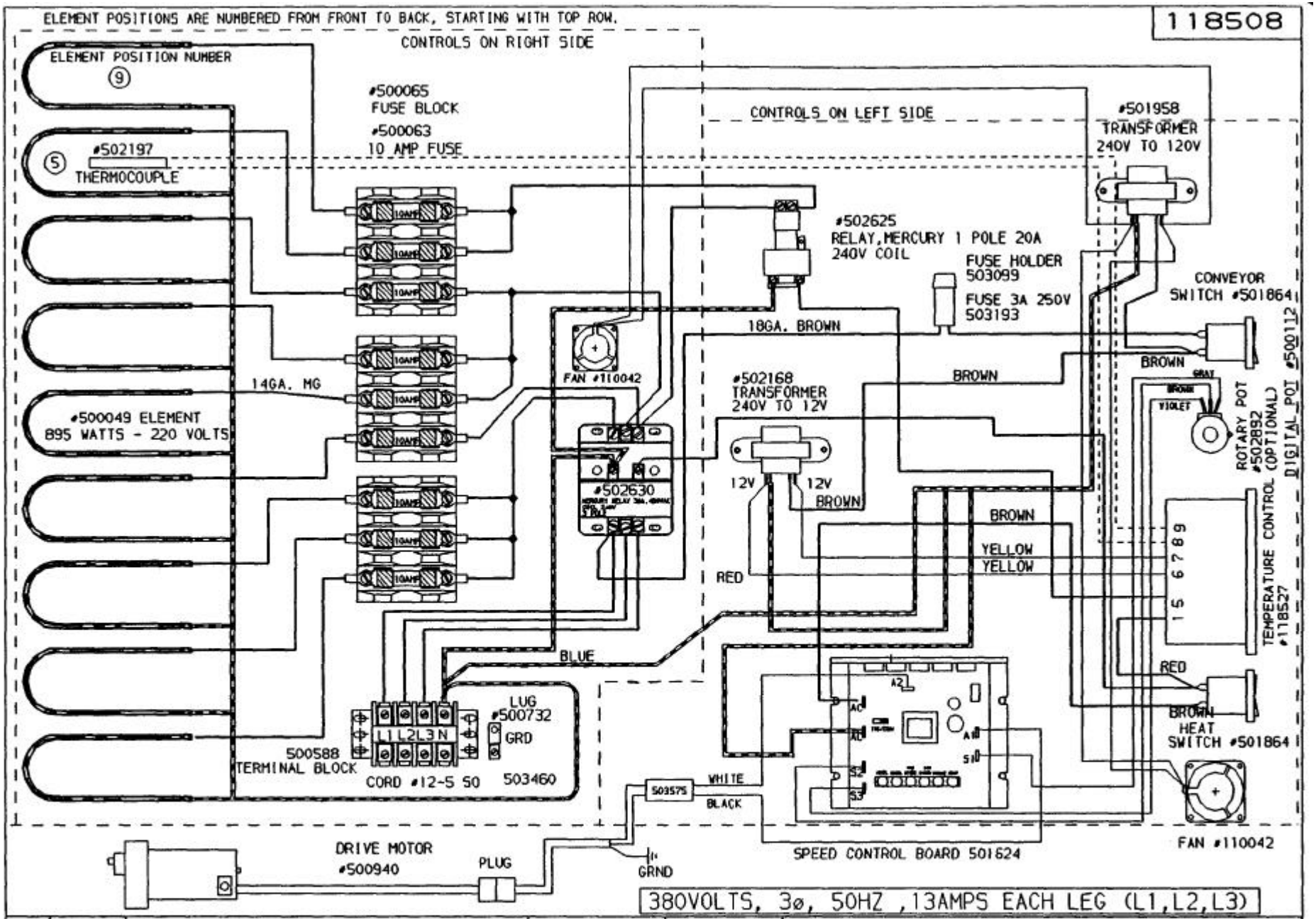


MEAT STRIPPER ADJUSTMENT INSTRUCTIONS

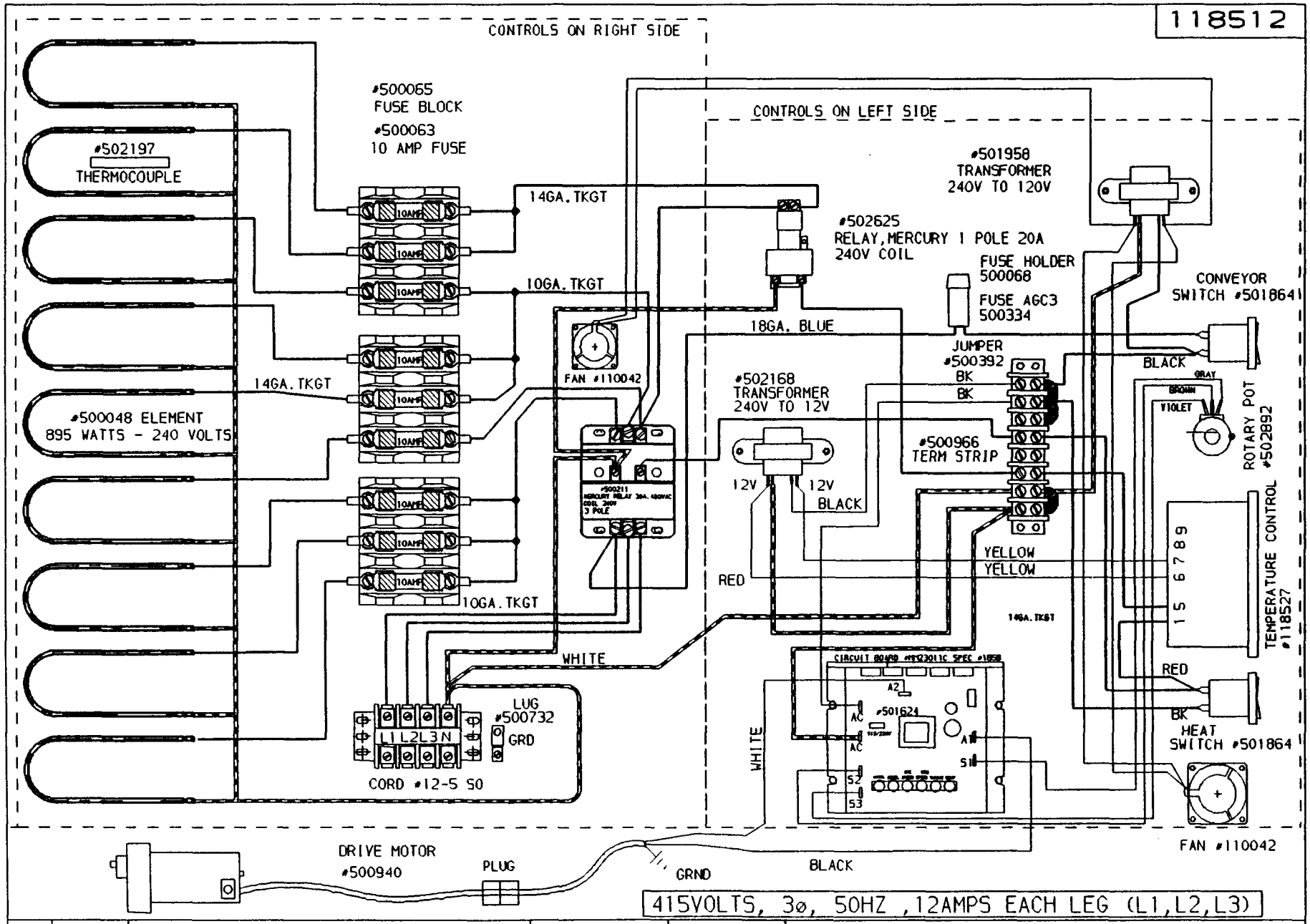
1. Insert meat stripper in to brackets.
2. Move brackets toward conveyor chain until stripper evenly and lightly touches conveyor chain.
3. Secure brackets.
4. Start conveyor chains and check for smooth operation without binding.
5. Adjust as needed to obtain best stripping results. (step 2)

MEAT STRIPPER ADJUSTMENT

FIGURE 6

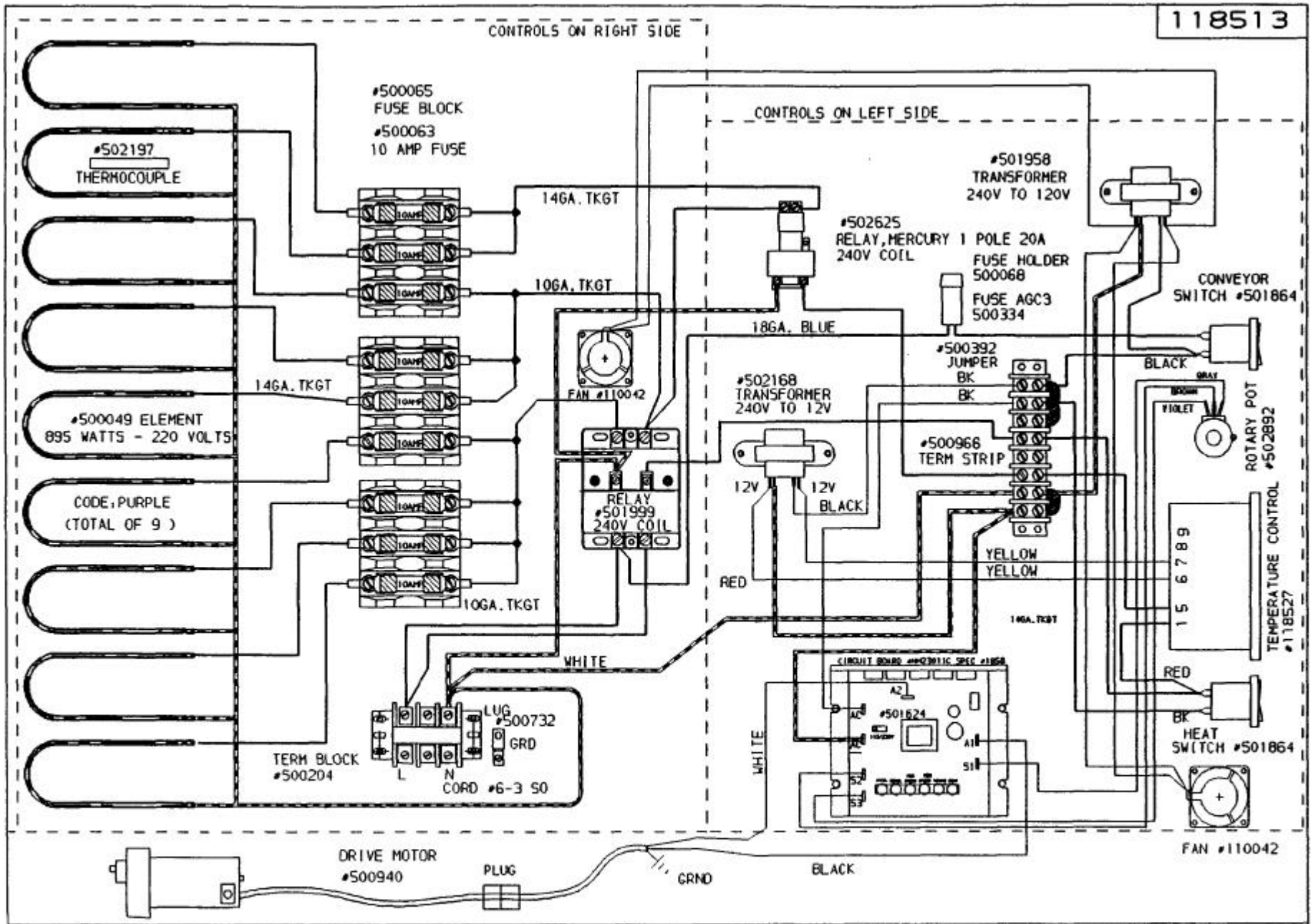


REV	DATE	DESCRIPTION	JR	29-APR-93	MARSHALL AIR SYSTEMS, INC.
8	18-AUG-1999	UPDATE WIRE COLORS FOR INTL CP	REFERENCE		SCHEMATIC, FR15BS, 380V, 3PH, 50Hz, 13A
			."X".	ALBINTLCE-380-3PH	DWG NO. 118508 REV 8



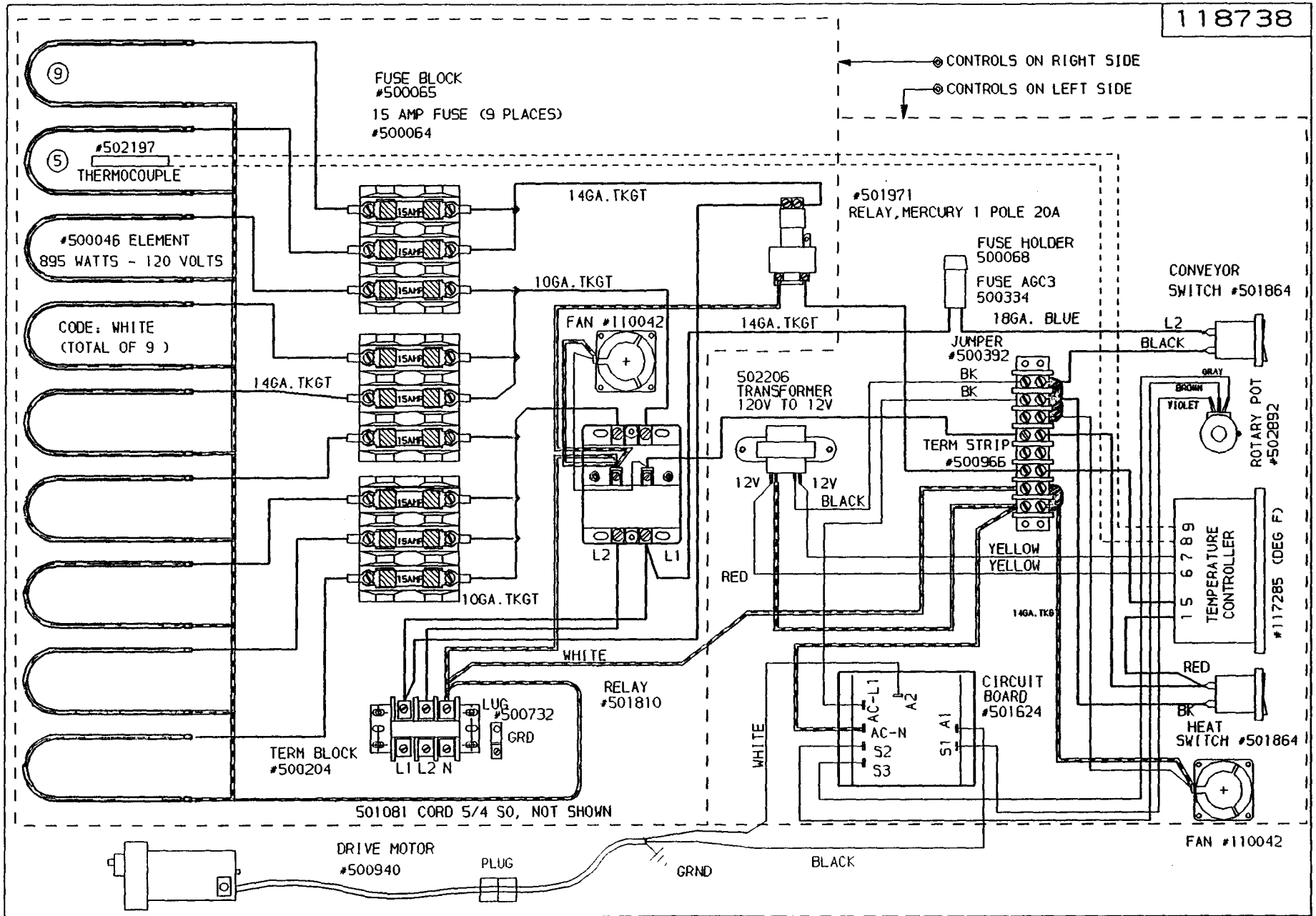
REV	DATE	DESCRIPTION	JR	29-APR-93	MARSHALL AIR SYSTEMS, INC.
1	11-JAN-94	ADD COOLING FAN. [JR]			
2	17-MAR-94	CH. INLINE FUSE TO PANEL MOUNT. [JR]			SCHEMATIC 415V, 3ø, 50HZ, 12A (FR15BS)
3	29-SEP-94	CH. F° TO C° TEMP. CONTROLLER. [MC/JR]			
4	30-SEP-94	CH. DIGITAL TO ROTARY POT			
5	07-AUG-97	CIRCUIT BOARD 501624 WAS 501078 [BL]		CODE: AL8	DWG NO. 118512 REV 5

PLOTTED 08-AUG-97 BY B. L.



REV	DATE	DESCRIPTION	JR	29-APR-93	MARSHALL AIR SYSTEMS, INC.	
1	11-JAN-94	ADD COOLING FAN. [JR]				
2	18-MAR-94	CH. INLINE TO PANEL MOUNT FUSE & CIRCUIT BOARD. [JR]	REFERENCE		SCHEMATIC 220V, 1ø, 50HZ, 37A (FR15BS)	
3	29-SEP-94	CH. F° TO C° TEMP. CONTROLLER. [MC/JR]				
4	30-SEP-94	CH. DIGITAL TO ROTARY POT				
5	08-AUG-97	CIRCUIT BOARD 501624 WAS 501078 [BL]	.___"X___.		CODE: AL8	DWG NO. 118513 REV 5

PLOTTED 08-AUG-97 BY B. L.



REV	DATE	DESCRIPTION
7	19-MAR-96	ADDED SURGE PROT. TO RELAY. [JR]
8	3-MAY-96	DELETED SURGE PROTECTOR 501171 [CP]
9	21-AUG-97	#501624 WAS #501078 [TS]
10	26-MAY-1999	TRANSFORMER 502206 WAS 502248 [CP]

JR | 29-APR-93

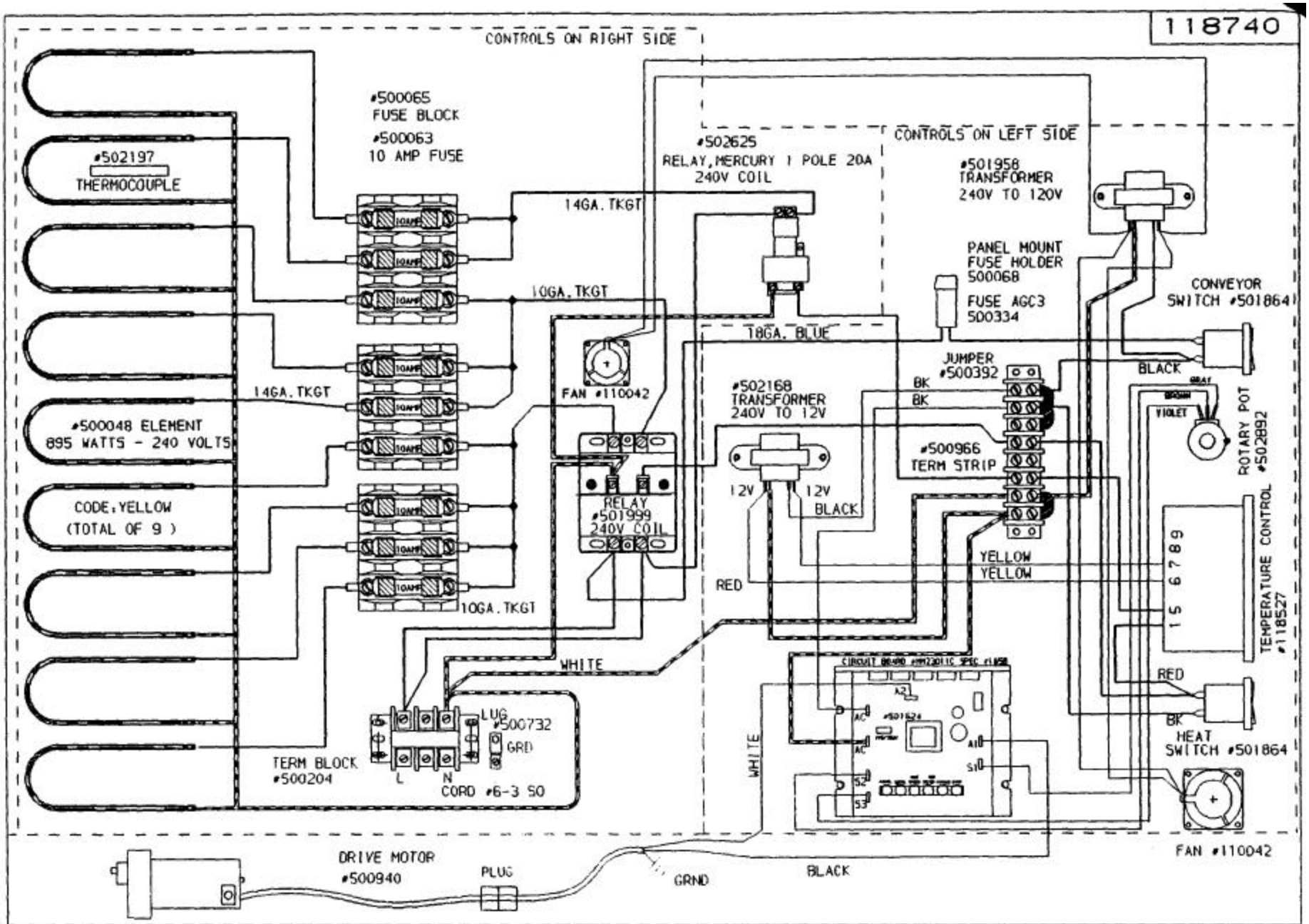
REFERENCE

"X"

MARSHALL AIR SYSTEMS, INC.

SCHEMATIC, FR15BS, 208V, 1PH, 60Hz, 39A

SCALE 1:1 NTS AL8 | DWG NO. 118738 | REV 10



REV	DATE	DESCRIPTION		
1	11-JAN-94	ADD COOLING FAN. [JR]	JR	29-APR-93
2	17-MAR-94	CH. INLINE FUSE TO PANEL MOUNT. [JR]		
3	29-SEP-94	CH. F° TO C° TEMP CONTROLLER. [MC/JR]		
4	30-SEP-94	CH. DIGITAL TO ROTARY POT		
5	11-JUL-95	UPDATED DWG. FOR PROPER REV. DISCRIPTIONS. [JR]		
6	08-AUG-97	CIRCUIT BOARD 501624 WAS 501078 [BL]		

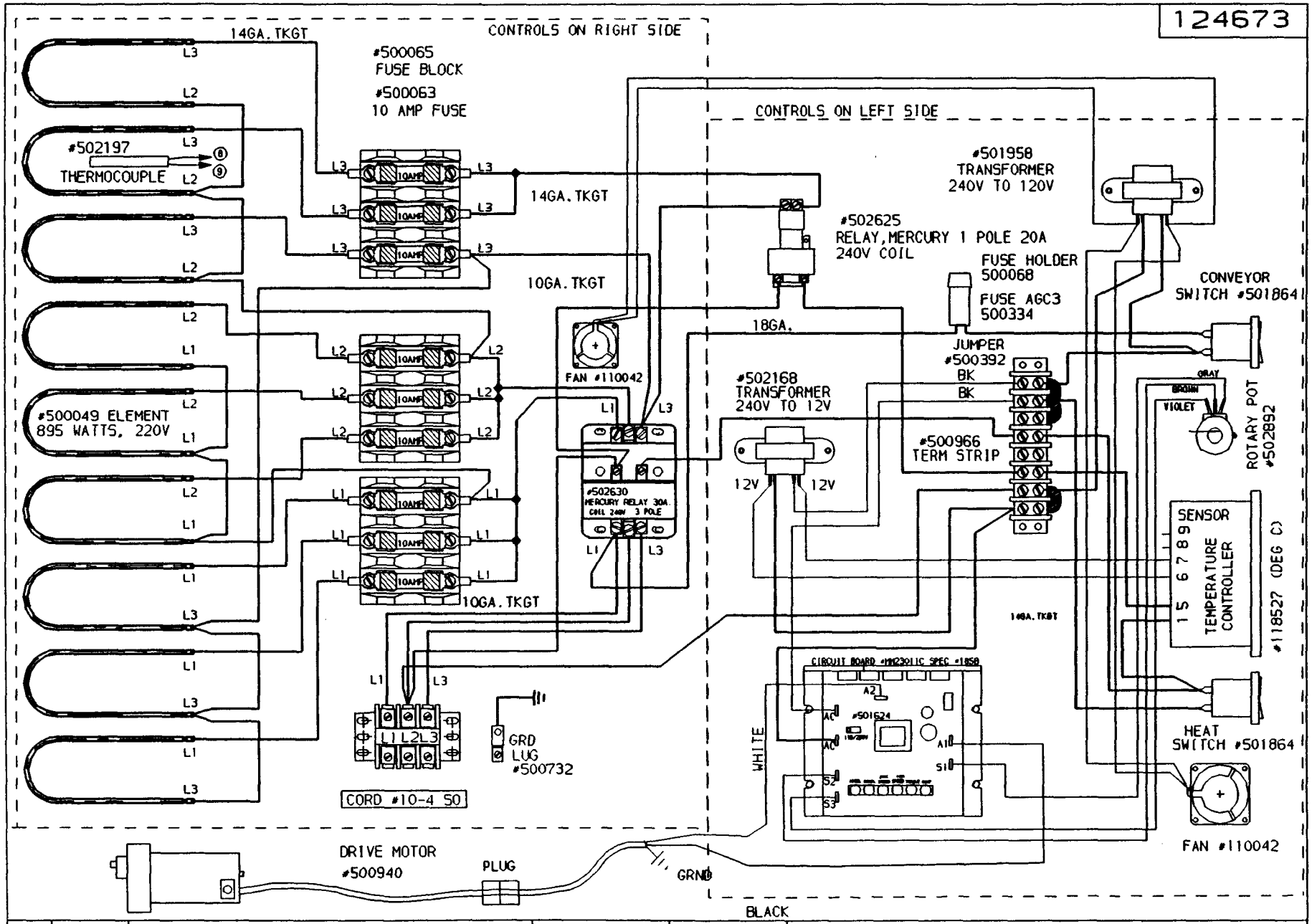
MARSHALL AIR SYSTEMS, INC.

SCHEMATIC 240V, 1ø, 50HZ, 34A (FR15BS)

CODE: AL8 | DWG NO. 118740 | REV 6

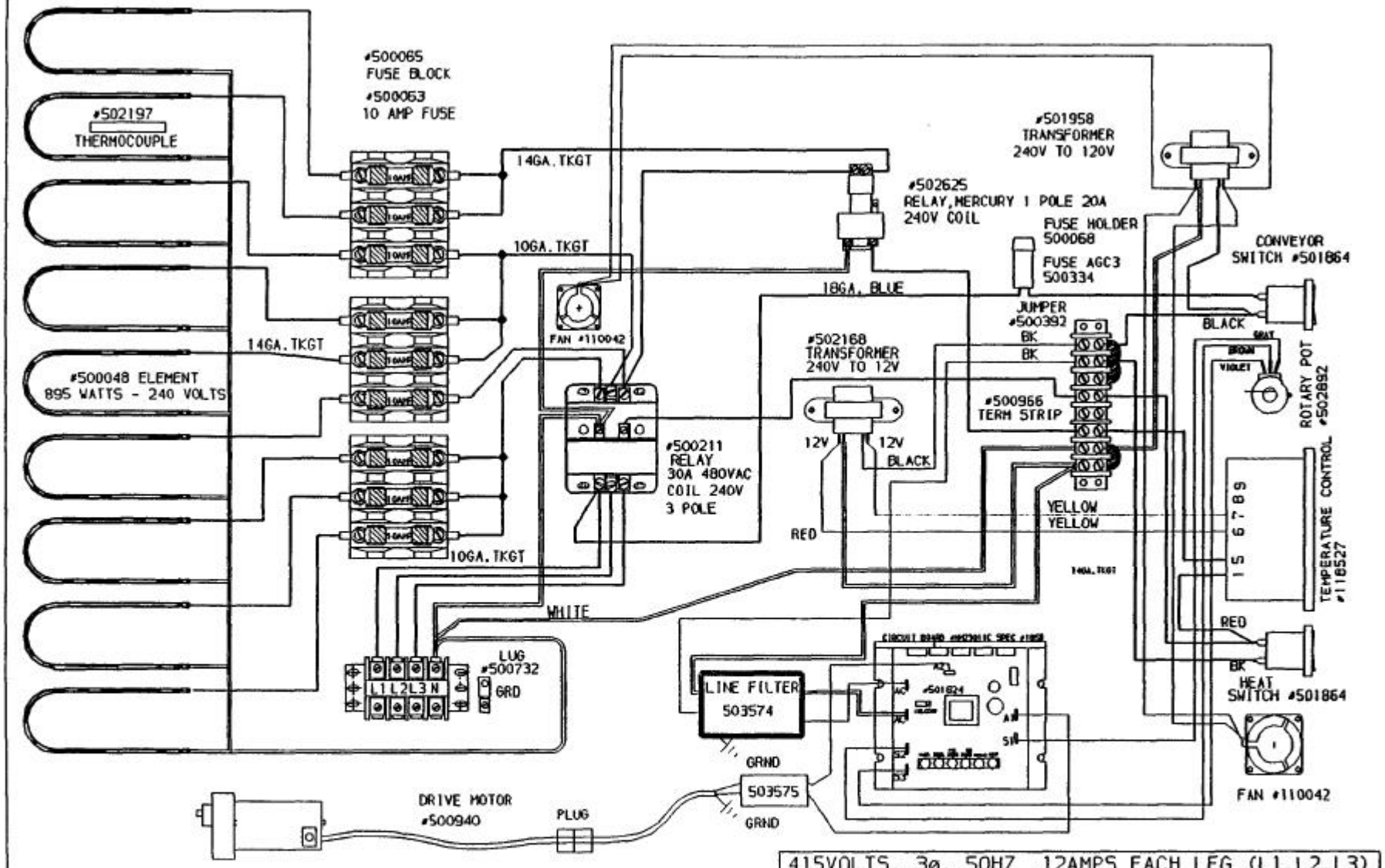
PLOTTED 11-AUG-97 BY B. L.

124673

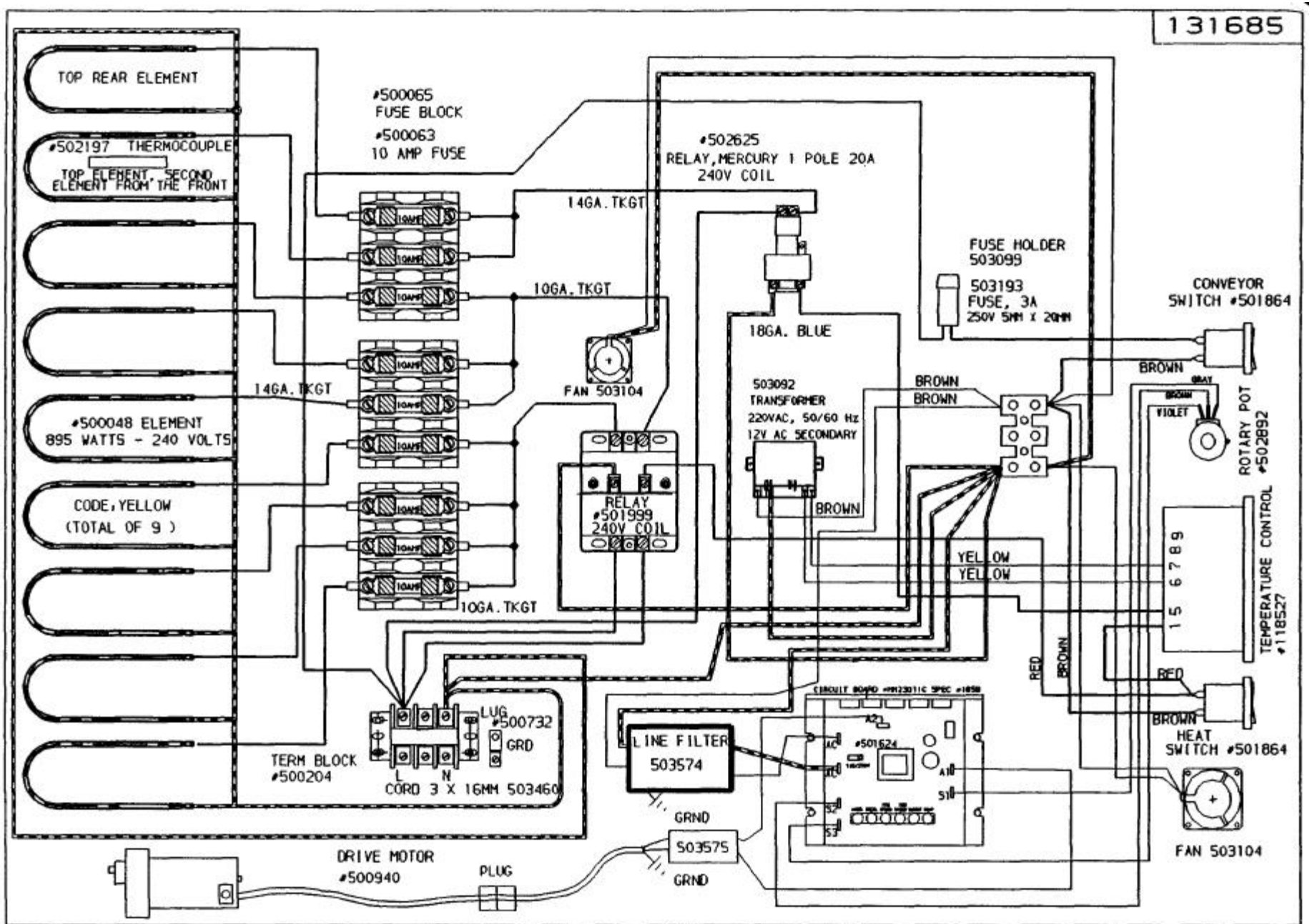


REV	DATE	DESCRIPTION	JR	13-JUN-95	MARSHALL AIR SYSTEMS, INC.
1	07-AUG-97	CIRCUIT BOARD #501624 WAS #501078 [BL]			SCHEMATIC 220V, 3ø, 60HZ, 25A (FR15BS)
				CODE: AL8	DWG NO. 124673 REV 1

135837



REV	DATE	DESCRIPTION	C.P.	12-OCT-98	MARSHALL AIR SYSTEMS, INC.
					SCHEMATIC, FR15BS, 415V, 3PH, 50Hz 12A
			REFERENCE		SIZE A / PROJ. / DWG NO. 135837 / REV 0
			--.---"X---.---		SCALE 1:1 IMAGE MAY BE REDUCED NTS / CODE: AL8INTLCE-415-3PH



REV	DATE	DESCRIPTION	C.P.	05-JUN-97	MARSHALL AIR SYSTEMS, INC.
4	05-DEC-97	503574 WAS 503187, ADDED 503575 [CP]			
5	26-MAR-98	UPDATED COLORS, ADDED LABEL TO HI-FIRE ELEMENTS [CP]	REFERENCE		SCHEMATIC, FR15BS, 230V, 1PH, 34A, 50/60Hz
6	27-JUL-98	DELETED 1 FUSE [CP]			
			.___"X___.___"	CODE: ALBINTLCE	DWG NO. 131685 REV 6