

Service

Commercial High Speed Combination Oven XpressChef Models Service Manual

XpressChef™



This manual is to be used by qualified service technicians only. ACP, Inc. does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

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For More Detailed Information on Care, Cleaning, Programming, etc, Please Refer to the Owner’s

Manual found online at: <https://acpsolutions.com/product-literature/>

IMPORTANT SAFETY INSTRUCTIONS



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

**Important Safety Information. Read before using this oven.
Keep these instructions for future reference.
If the oven changes ownership, be sure this guide accompanies oven.**

For additional product documentation or more detailed operating instructions visit:
www.acpsolutions.com

CONTACT INFORMATION

Any questions or to locate an authorized ACP servicer, call ACP ComServ Service Support.

- Inside** the U.S.A. or Canada, call toll-free 866-426-2621.
- Outside** the U.S.A. and Canada, call 319-368-8120.
- Email:** CommercialService@acpsolutions.com.

Warranty service must be performed by an authorized ACP servicer. ACP also recommends contacting an authorized ACP servicer, or ACP ComServ Service Support if service is required after warranty expires.

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- A. **DO NOT** attempt to operate this oven with the door open since open door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.
- B. **DO NOT** place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
- C. **DO NOT** operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the:
 - 1. door (bent)
 - 2. hinges and latches (broken or loosened)
 - 3. door seals and sealing surfaces.
- D. The oven should not be adjusted or repaired by anyone except properly qualified service personnel.



CAUTION

To avoid risk of personal injury or property damage, observe the following safety instructions:

General Use:

1. **Do not** use regular cooking thermometers in oven. Most cooking thermometers contain mercury and may cause an electrical arc, malfunction, or damage to oven.
2. Never use paper, plastic, or other combustible materials that are not intended for cooking.
3. When cooking with paper, plastic, or other combustible materials, follow manufacturer's recommendations on product use.
4. **Do not** use paper towels which contain nylon or other synthetic fibers. Heated synthetics could melt and cause paper to ignite.
5. To avoid surface deterioration, keep the oven in a clean condition. Infrequent cleaning could adversely affect the life of the appliance and possibly result in a hazardous situation.
6. Clean oven regularly and remove any food deposits.

Heating Foods and Liquids:

7. Liquids such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing to be boiling due to surface tension of the liquid. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. **THIS COULD RESULT IN VERY HOT LIQUIDS SUDDENLY BOILING OVER WHEN A SPOON OR OTHER UTENSIL IS INSERTED INTO THE LIQUID.**
To reduce the risk of injury to persons:
 - a. Do not overheat the liquid.
 - a. Stir the liquid both before and halfway through heating it.
 - a. Do not use straight-sided containers with narrow necks.
 - a. After heating, allow the container to stand in the microwave for a short time before removing it.
 - b. Use extreme care when inserting a spoon or other utensil into the container.
8. **Do not** deep fat fry in oven. Fat could overheat and be hazardous to handle.
9. **Do not** cook or reheat eggs in shell or with an unbroken yolk using microwave energy. Pressure may build up and erupt. Pierce yolk with fork or knife before cooking.
10. Pierce skin of potatoes, tomatoes, and similar foods before cooking with microwave energy. When skin is pierced, steam escapes evenly.
11. **Do not** heat sealed containers or plastic bags in oven. Food or liquid could expand quickly and cause container or bag to break. Pierce or open container or bag before heating
12. **Do not** heat baby bottles in oven.
13. Baby food jars shall be open when heated and contents stirred or shaken before consumption, in order to avoid burns.
14. Never use oven to heat alcohol or food containing alcohol as it can more easily catch fire if overheated.

Additional Microwave Oven Safety Instructions:

15. **Do not** operate equipment without load or food in oven cavity.
16. Use only popcorn in packages designed and labeled for microwave use. **Popping time varies depending on oven wattage.** Do not continue to heat after popping has stopped. Popcorn will scorch or burn. Do not leave oven unattended.
17. **Do not** use metal utensils in oven.
18. An authorized servicer **MUST** inspect equipment annually. Record all inspections and repairs for future use.

OVEN SPECIFICATIONS - 60hz



CAUTION

All safety information must be followed



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	JET10 (V)	JET14 (V)*	JET14B or P	JET19 (V)	JET14VSA	JET19VSA
Power Source						
Voltage AC	208/240	208/240	220	208/240	220	220
Amperage (single unit)	15A	16A	15A	26A	16A	32A
Frequency	60HZ	60HZ	60HZ	60HZ	60HZ	60HZ
Single phase, 3 wire grounded	Yes	Yes	Yes	Yes	Yes	Yes
Power Output						
Microwave energy Output (IEC705)	1000W	1400W	1400W	1900W	1400W	1900W
Convection Output	2700W	2700W	2700W	2700W	2700W	2700W
Number of Magnetrons	1	2	2	2	2	2
Operating frequency	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz
Temperature Range	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F
Catalytic Converter	V Models	V Models	No	V Models	Yes	Yes
Power Consumption						
Cook condition	3200W	3200W	3200W	5300W	3300W	5700W
Dimensions						
Cabinet						
Width	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")
Height	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")
Depth (includes door handle)	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")
Oven Interior						
Width	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")
Height	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")
Depth	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")
Weight						
Crated	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)
Uncrated	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)

OVEN SPECIFICATIONS - 60hz Korean Models



CAUTION

All safety information must be followed



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	JET14K	JET14VK
Power Source		
Voltage AC	220	220
Amperage (single unit)	16A	16A
Frequency	60HZ	60HZ
Single phase, 3 wire grounded	Yes	Yes
Power Output		
Microwave energy Output (IEC705)	1400W	1400W
Convection Output	2700W	2700W
Number of Magnetrons	2	2
Operating frequency	2450 MHz	2450 MHz
Temperature Range	95-250C 200-475F	95-250C 200-475F
Catalytic Converter	No	Yes
Power Consumption		
Cook condition	3200W	3200W
Dimensions		
Cabinet		
Width	490 cm (19.250")	490 cm (19.250")
Height	461 cm (18.125")	461 cm (18.125")
Depth (includes door handle)	671 cm (26.5")	671 cm (26.5")
Oven Interior		
Width	330 cm (13")	330 cm (13")
Height	267 cm (10.5")	267 cm (10.5")
Depth	381 cm (15")	381 cm (15")
Weight		
Crated	53 kg (116 lbs)	53 kg (116 lbs)
Uncrated	51 kg (115 lbs)	51 kg (115 lbs)

OVEN SPECIFICATIONS - 60hz 3 Phase - Taiwan

CAUTION

All safety information must be followed

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	JET14VT
Power Source	
Voltage AC	380
Amperage (single unit)	16A
Frequency	60HZ
Single phase, 3 wire grounded	No
Power Output	
Microwave energy Output (IEC705)	1400W
Convection Output	2700W
Number of Magnetrons	2
Operating frequency	2450 MHz
Temperature Range	95-250C 200-475F
Catalytic Converter	Yes
Power Consumption	
Cook condition	3300W
Dimensions	
Cabinet	
Width	490 cm (19.250")
Height	461 cm (18.125")
Depth (includes door handle)	671 cm (26.5")
Oven Interior	
Width	330 cm (13")
Height	267 cm (10.5")
Depth	381 cm (15")
Weight	
Crated	53 kg (116 lbs)
Uncrated	51 kg (115 lbs)

OVEN SPECIFICATIONS – 50hz Single Phase

CAUTION

All safety information must be followed

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	JET510 (V)	JET514 (V)*	JET514A	JET514C (V)	JET514I	JET514U	JET5192 (V)
Power Source							
Voltage AC	220	230-240	230	220	230	230-240	230-240
Amperage (single unit)	16A	16A	15A	16A	16A	13A	16A
Frequency	50HZ	50HZ	50HZ	50HZ	50HZ	50HZ	50HZ
Single phase, 3 wire grounded	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Output							
Microwave energy Output (IEC705)	1000W	1400W	1400W	1400W	1400W	1400W	1900W
Convection Output	2700W	2700W	2700W	2700W	2700W	2700W	2700W
Number of Magnetrons	1	2	2	2	2	2	2
Operating frequency	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz	2450 MHz
Temperature Range	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F	95-250C 200-475F
Catalytic Converter	V Models	V Models	No	V Models	No	No	V Models
Power Consumption							
Cook condition	3200W	2900W	2900W	2900	2900W	2900W	3100W
Dimensions							
Cabinet							
Width	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")	490 cm (19.250")
Height	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")	461 cm (18.125")
Depth (includes door handle)	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")	671 cm (26.5")
Oven Interior							
Width	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")	330 cm (13")
Height	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")	267 cm (10.5")
Depth	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")	381 cm (15")
Weight							
Crated	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)	53 kg (116 lbs)
Uncrated	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)	51 kg (115 lbs)

OVEN SPECIFICATIONS – 50hz 3 Phase



All safety information must be followed



To avoid risk of electrical shock, personal injury, or death, disconnect power to oven and discharge capacitor before servicing, unless testing requires power.

Models	JET5193	JET519V3
Power Source		
Voltage AC	400	400
Amperage (single unit)	16A	16A
Frequency	50HZ	50HZ
Single phase, 3 wire grounded	No	No
Power Output		
Nominal microwave energy Output (IEC705)	1900W	1900W
Convection Output	2700W	2700W
Number of Magnetrons	2	2
Operating frequency	2450 MHz	2450 MHz
Temperature Range	95-250C 200-475F	95-250C 200-475F
Power Consumption		
Cook condition	6200W	6200W
Dimensions		
Cabinet		
Width	490 cm (19.250")	490 cm (19.250")
Height	461 cm (18.125")	461 cm (18.125")
Depth (includes door handle)	671 cm (26.5")	671 cm (26.5")
Oven Interior		
Width	330 cm (13")	330 cm (13")
Height	267 cm (10.5")	267 cm (10.5")
Depth	381 cm (15")	381 cm (15")
Weight		
Crated	53 kg (116 lbs)	53 kg (116 lbs)
Uncrated	51 kg (115 lbs)	51 kg (115 lbs)

INSTALLATION

IMPORTANT

ACP, Inc. Requires Installing a **Type D** Circuit Breaker for all High-Speed Xpress Oven Installations.

Unpacking Oven

- Inspect oven for damage such as dents in door or dents inside oven cavity.
- Report any dents or breakage to source of purchase immediately. Do not attempt to use oven if damaged.
- Remove all materials from oven interior.
- If oven has been stored in extremely cold area, wait a few hours before connecting power.

Radio Interference

Microwave operation may cause interference to radio, television, or similar. Reduce or eliminate interference by doing the following:

- Clean door and sealing surfaces of oven according to instructions in “Care and Cleaning” section.
- Place radio, television, wireless routers, etc. as far away as possible from oven.
- Use a properly installed antenna on radio, television, etc. to obtain a stronger signal reception.

Oven Placement

- Do not install oven next to or above source of heat, such as pizza oven or deep fat fryer. This could cause oven to operate improperly and could shorten life of electrical parts.
- Do not block or obstruct oven filters. Allow access for cleaning.
- Install oven on level counter-top surface.
- If provided, place the warning label in a conspicuous place close to oven.
- Outlet should be located so that plug is accessible when oven is in place.

Oven Clearances

- Allow at least 4” (10cm) of clearance around top of oven. Proper air flow around oven cools electrical components. With restricted air flow, oven may not operate properly and life of electrical parts is reduced.
- There is not an installation clearance requirement for the back of the oven.
- Allow at least 1’ (2.5cm) of clearance around sides of oven.
- Install oven so its bottom is at least 3 feet (91.5cm) above the floor.

QUICK START REFERENCE

CONTROL PANEL FEATURES

- (A) USB Port
- (B) Display
- (C) UP keypad
- (D) DOWN keypad
- (E) POWER ON/OFF keypad
- (F) MENU Keypad
- (G) Number Keypads
- (H) STOP/RESET Keypad
- (I) START/OK Keypad



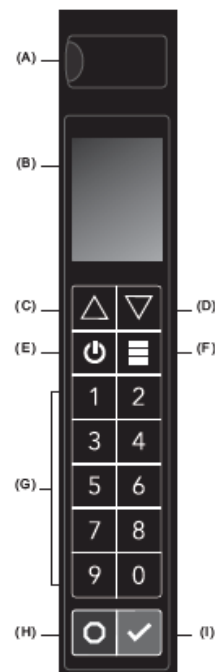
MENU SCREENS

Page 1

- (1) Preheat Temperature
- (2) Edit Recipe
- (3) Manual Cook
- (4) Date/Time
- (5) User Options

Page 2

- (1) Load File
- (2) Service Mode
- (3) Enter MW Only



So...how do I use it?

Edit Oven Preheat Temperature

This oven can be set to a preheat temperature between 200°–475°F (95°–250°C).

1. Press MENU (≡) keypad. MENU screen will display.*
2. Press number "1" keypad to access "Preheat Temp".
3. Press number keypads to enter desired preheat temperature.
4. **To save changes:** Press START/OK keypad.
5. **To discard changes:** Press STOP/RESET keypad.

Preset Recipe Keypads

To cook food using preprogrammed cooking sequences. Oven must be preheated before cooking. From READY or DOOR OPEN screen:

1. Open oven door, place food in oven, and close oven door.
2. Press desired number keypad(s).
3. Oven operates and time counts down.
4. At the end of the cooking cycle, the oven beeps. Carefully remove food from oven.

**Note: If PIN Code is enabled, your unique 4 digit pin code will be required to access Menu Screen*

Power-On, Preheat

Press POWER ON/OFF keypad to begin preheating. WARMING UP screen displays. READY screen will display once oven reaches the specified preheat temperature. The factory default preheat setting is 475°F (250°C).

Manual Cooking Mode

Allows operator to heat without changing the preset recipe keypads.

Oven must be preheated before cooking. From READY or DOOR OPEN screen:

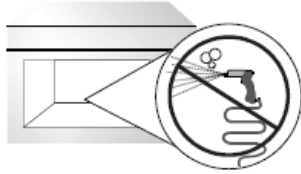
1. Open oven door, place food in oven, and close door.
2. Press MENU (≡) keypad. MENU screen will display.*
3. Press number "3" keypad to access "Manual Cook".
4. **To navigate to editable fields:** Press UP/DOWN (▲▼) keypads. Active field will be highlighted in red. Editable fields include: Oven Temperature; Cook Time; %MW Power Level (0-100% in 10% increments); and Add a Stage.
5. Press number keypads to enter desired settings per field.
6. **To add additional cooking stages:** Press DOWN (▼) keypad until "+ STAGE" is highlighted. Repeat steps 4-6.
7. Press START/OK keypad to begin cooking.
8. At the end of the cooking cycle, the oven beeps. Oven interior and cooking dish will be hot. Carefully remove food from oven.

Edit Recipe Mode

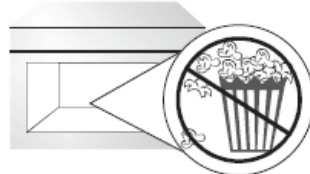
1. Press MENU (≡) keypad. MENU screen will display.*
2. Press number "2" keypad to access "Edit Recipe".
3. **To navigate to editable fields:** Press UP/DOWN (▲▼) keypads. Active field will be highlighted in red. Editable fields include: Recipe Name; Oven Temperature; Cook Time; %MW Power Level (0-100% in 10% increments); and Add a Stage.
4. Press number keypads to enter desired settings per field.
5. **To add additional cooking stages:** Press DOWN (▼) keypad until "+ STAGE" is highlighted. Repeat steps 3-5.
6. **To save and exit:** Press START/OK keypad.
7. **To discard changes:** Press STOP/RESET keypad.

Quick Start Guide

Refer to Owner's Manual for Safety Statements. Complete Owner's Manual available online.



DO NOT power spray



No popcorn

Access and Modify User Options

There are several options you can change to customize the operation of the oven. Options are shown below. The factory setting is shown in bold type.

1. Press MENU (≡) keypad.
Note: If PIN Code is enabled, your unique 4 digit pin code will be required.
2. Press number "5" keypad to access "User Options".
3. To scroll between pages of settings: Press UP/DOWN (▲▼) keypads.
4. To access available options for a setting: Press corresponding number keypad.
5. To change a setting: Press corresponding number keypad.
6. To save changes: START/OK keypad.
7. To exit: Press STOP/RESET keypad.

STANDARD DEFAULT PER MODEL (FACTORY SETTINGS IN BOLD)

Factory setting may vary by model

SETTING	DISPLAYED OPTIONS	DESCRIPTION
End of Cycle Beep	3 Seconds Continuous Burst	3 second continuous beep Continuous beep until door is opened 5 beep bursts until door is open
Speaker Volume	Off Low Medium High	Sets volume to off Sets volume to low Sets volume to medium Sets volume to high
Key Beep	Off On	Prevents beep when keypad is pressed Allows beep when keypad is pressed
Reset on Door Open	End Cook Cycle Pause Cook Cycle	Cancels heating time count down after door is opened during cycle. Allows oven to resume heating time countdown after door is opened during cycle
Digit Entry	Single Digit Double Digit Folders	Allows 10 (0-9) preprogrammed recipes Allows 100 (00-99) preprogrammed recipes Allows 10 folders (0-9), each with 10 preprogrammed recipes
Maximum Cook Time	10 minutes 20 minutes	Allows 10 minutes of heating time Allows 20 minutes of heating time
Keypad Enable Window	15 seconds 30 seconds 1 minute 2 minutes	15 seconds after oven door is opened, keyboard disabled 30 seconds after oven door is opened, keyboard disabled 1 minute after oven door is opened, keyboard disabled 2 minutes after oven door is opened, keyboard disabled
On-the-Fly Programming	Off On	Disables pushing any additional keypads during a cook cycle Allows pushing additional keypads to add or change time in the middle of a cook cycle
Clean Filter Reminder	Off Every 7 Days Every 30 Days Every 90 Days	Oven will not display "Clean Filter Message" Oven will display "Clean Filter Message" every 7 days Oven will display "Clean Filter Message" every 30 days Oven will display "Clean Filter Message" every 90 days
Preheat Warning	Enabled Disabled	Oven will display warning message if recipe temperature does not match oven temperature Oven will not display temperature warning message
Auto Shut-Off	Never 2 Hours 4 Hours 8 Hours	Oven will not automatically shut-off After 2 hours of inactivity, oven will automatically shut-off After 4 hours of inactivity, oven will automatically shut-off After 8 hours of inactivity, oven will automatically shut-off
PIN Code	Off On Set PIN Code	PIN Code not required to access Menu or User Options PIN Code required to access Menu and User Options PIN Code required. Create new 4 digit PIN Code
Language	Chinese (Mandarin), Danish, Dutch, English, Filipino, French, German, Greek, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Ukrainian, Vietnamese	
Temperature Unit	Fahrenheit Celsius	Temperatures are displayed in Fahrenheit for 60Hz models Temperatures are displayed in Celsius for 50Hz models
Quantity Prompt**	On Off	Prompts the user for portion quantity multiplier (1-9) upon selecting a preset program Allows user to cook individual portions

Oven Cleaning Basics

Refer to Owner's Manual for complete instructions and recommendations (available online)

- DO** wear protective gloves and glasses
- DO** always use recommended cleaning supplies: *Damp towel, plastic scouring pad, ACP Oven Cleaner and ACP Oven Shield Protectant*
- DO** allow oven and tools to cool before cleaning

DO NOT use abrasive cleaners or cleaners containing ammonia, citrus, phosphates, chlorine, sodium or potassium hydroxide (lye). Use of unapproved cleaning agents will void the terms of the warranty.

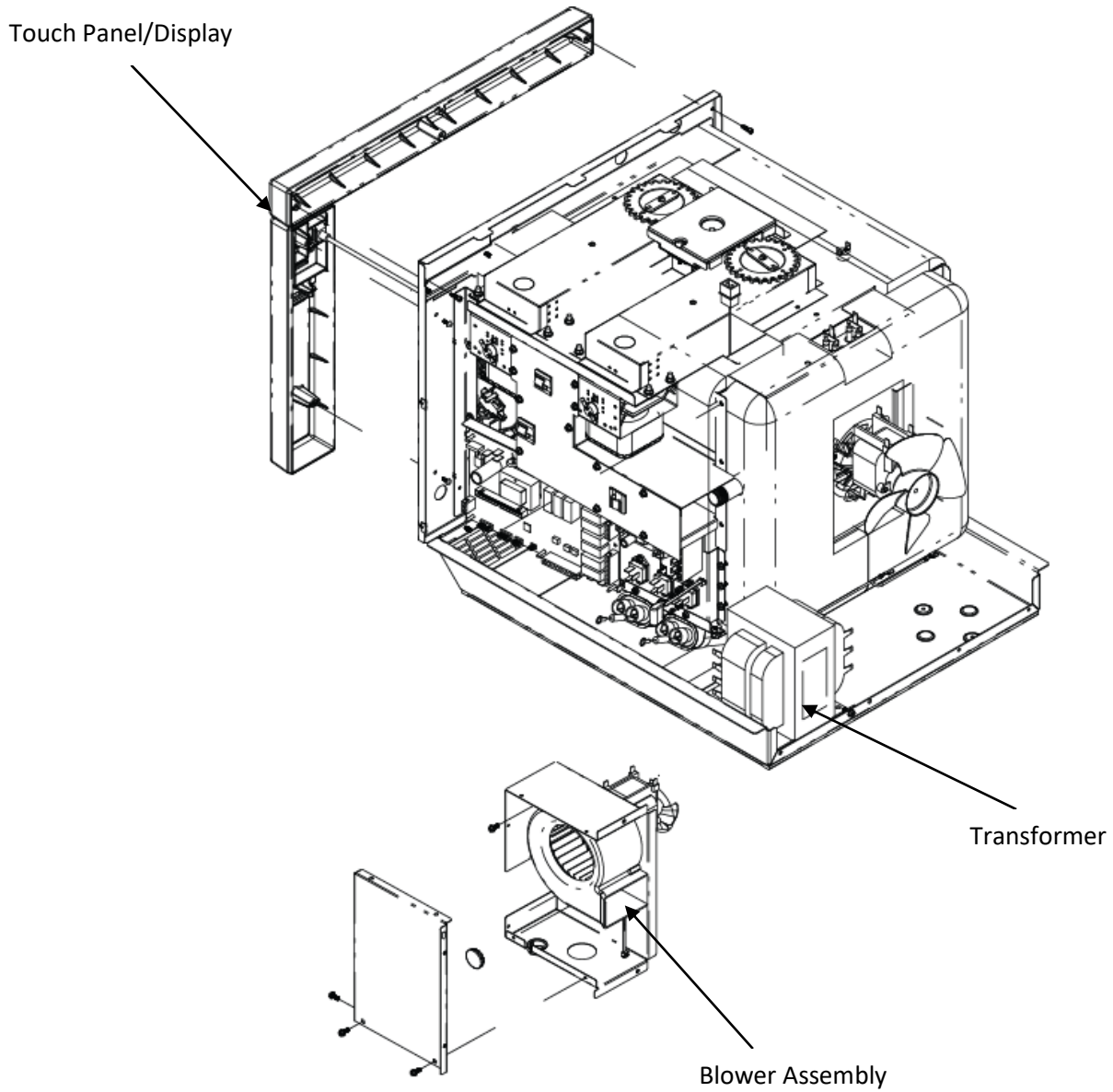
DO NOT use water pressure style cleaning systems

DO NOT spray cleaning solution into perforations.

DO NOT use knife, metal utensil, or steel wool pad to remove baked-on material.

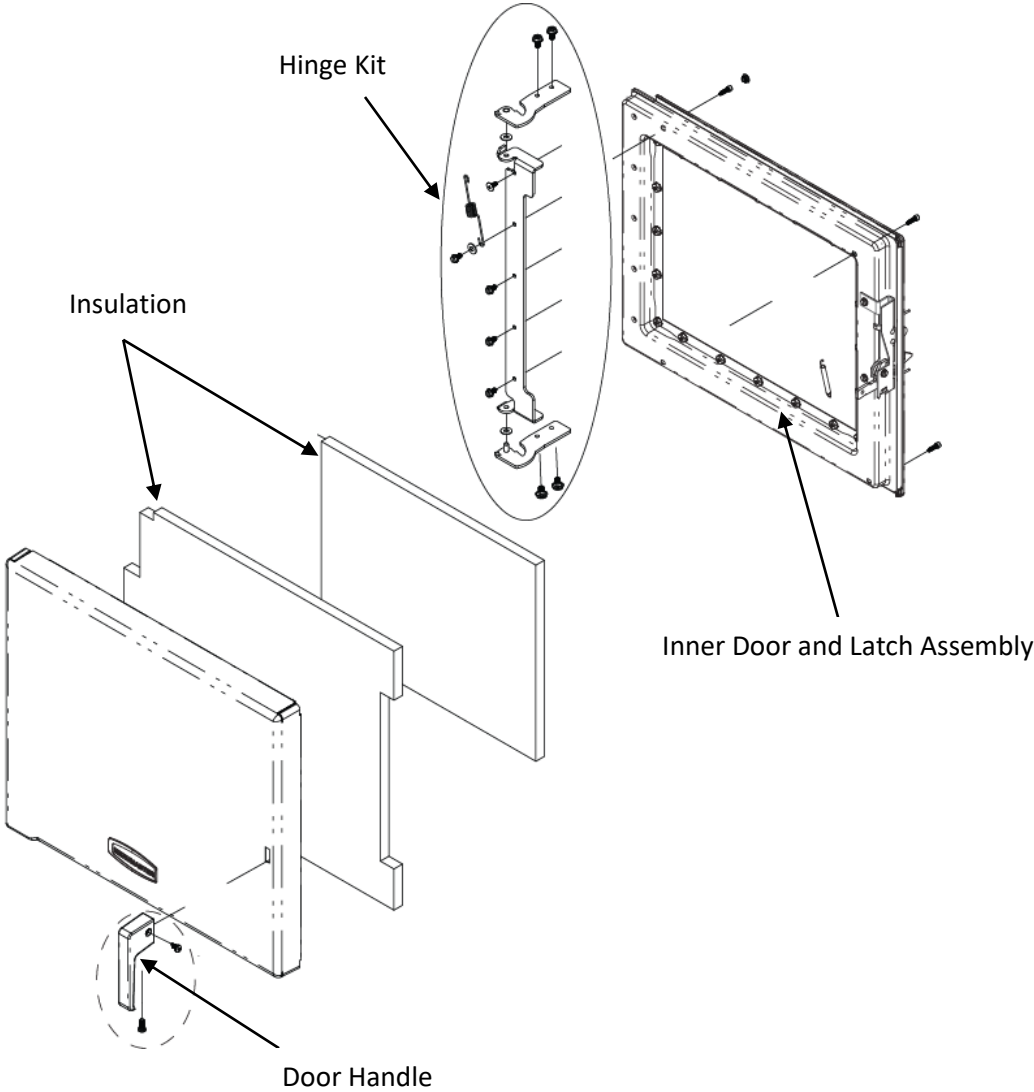
OVEN CONSTRUCTION

BLOWER MOTOR, TOUCH PANEL/DISPLAY, TRANSFORMER



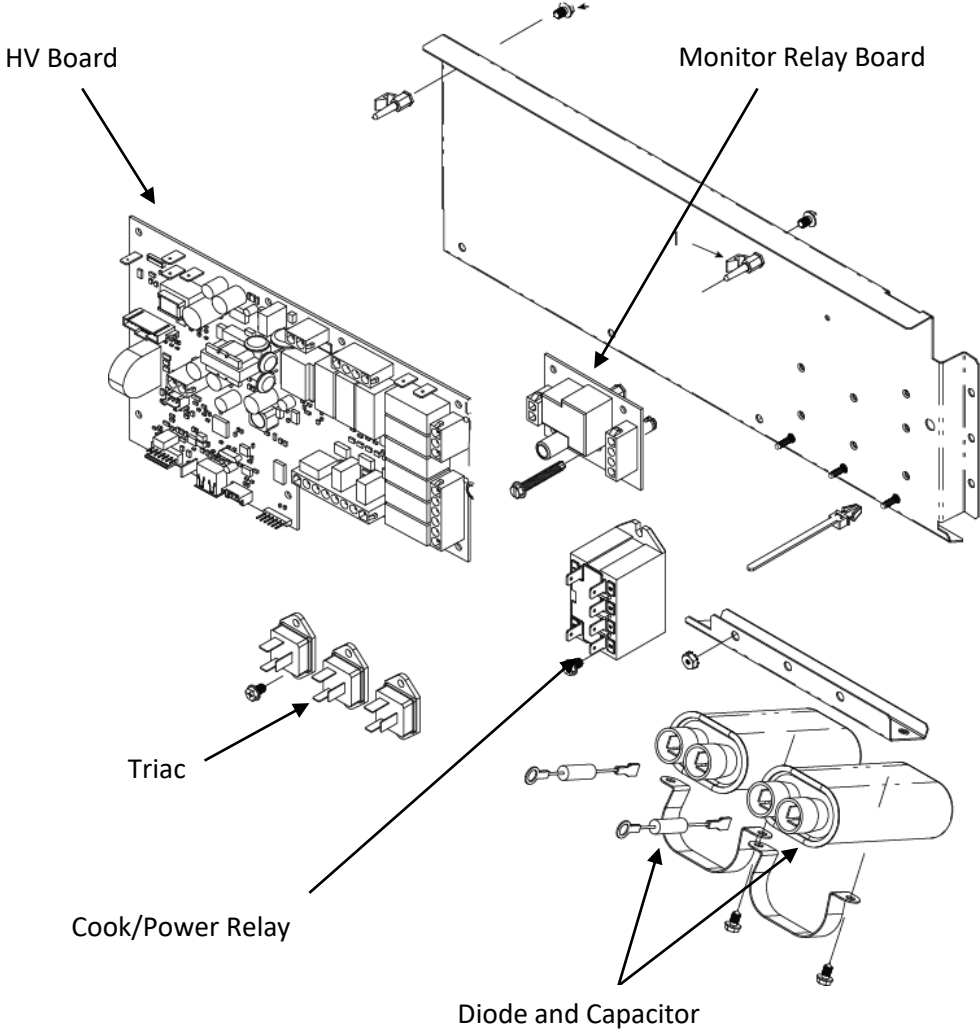
OVEN CONSTRUCTION

DOOR and DOOR HANDLE



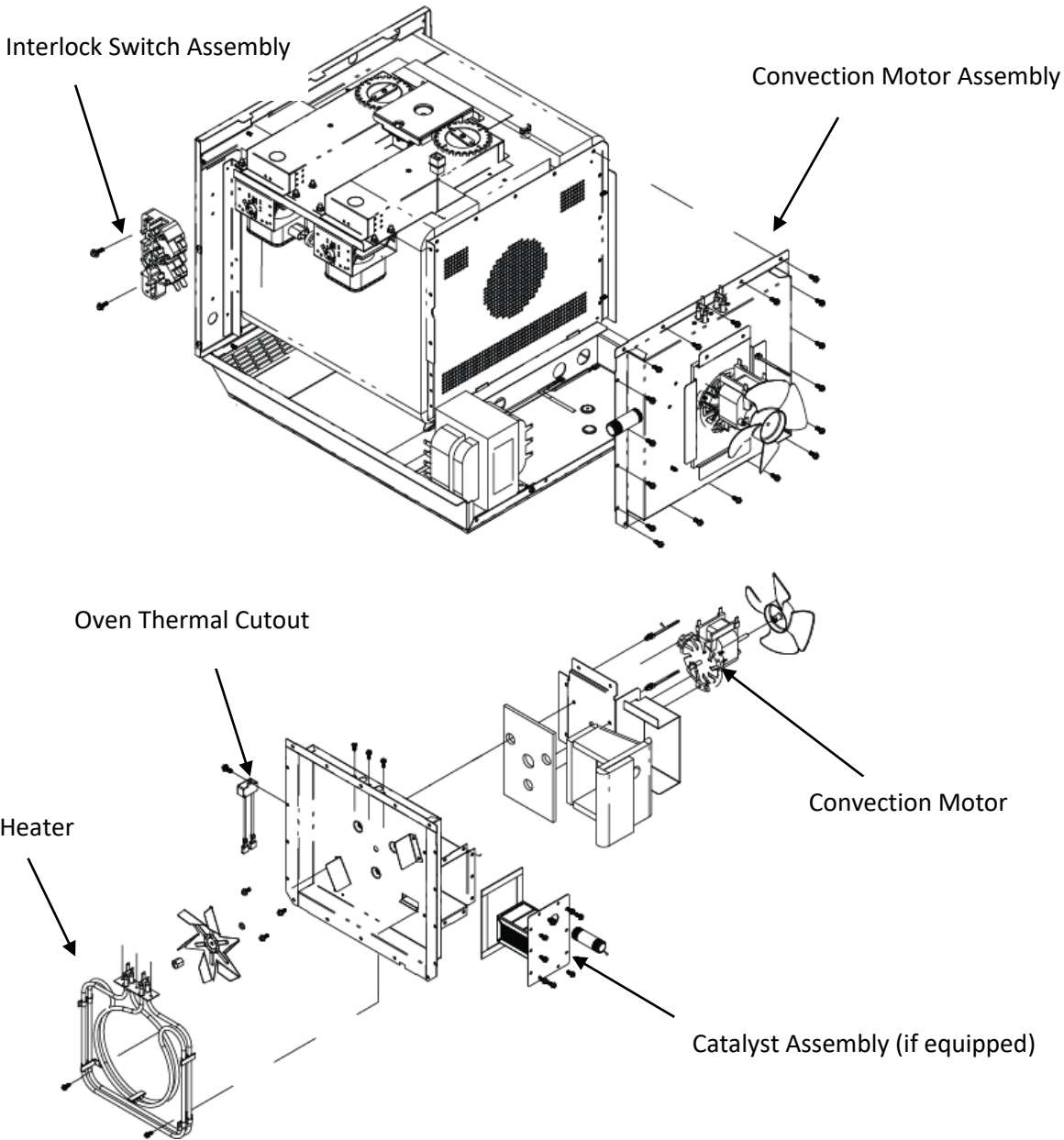
OVEN CONSTRUCTION

HV BOARD, MONITOR RELAY BOARD, and CAPACITORS



OVEN CONSTRUCTION

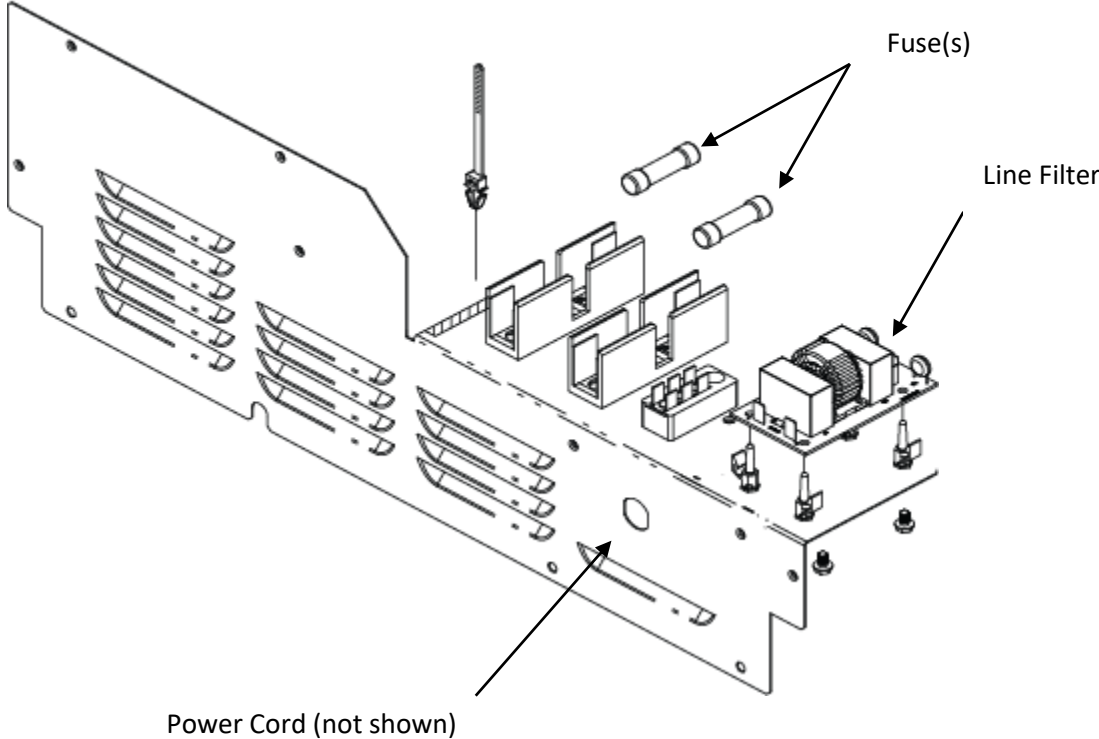
INTERLOCK, CONVECTION MOTOR, and HEATER BOX



OVEN CONSTRUCTION

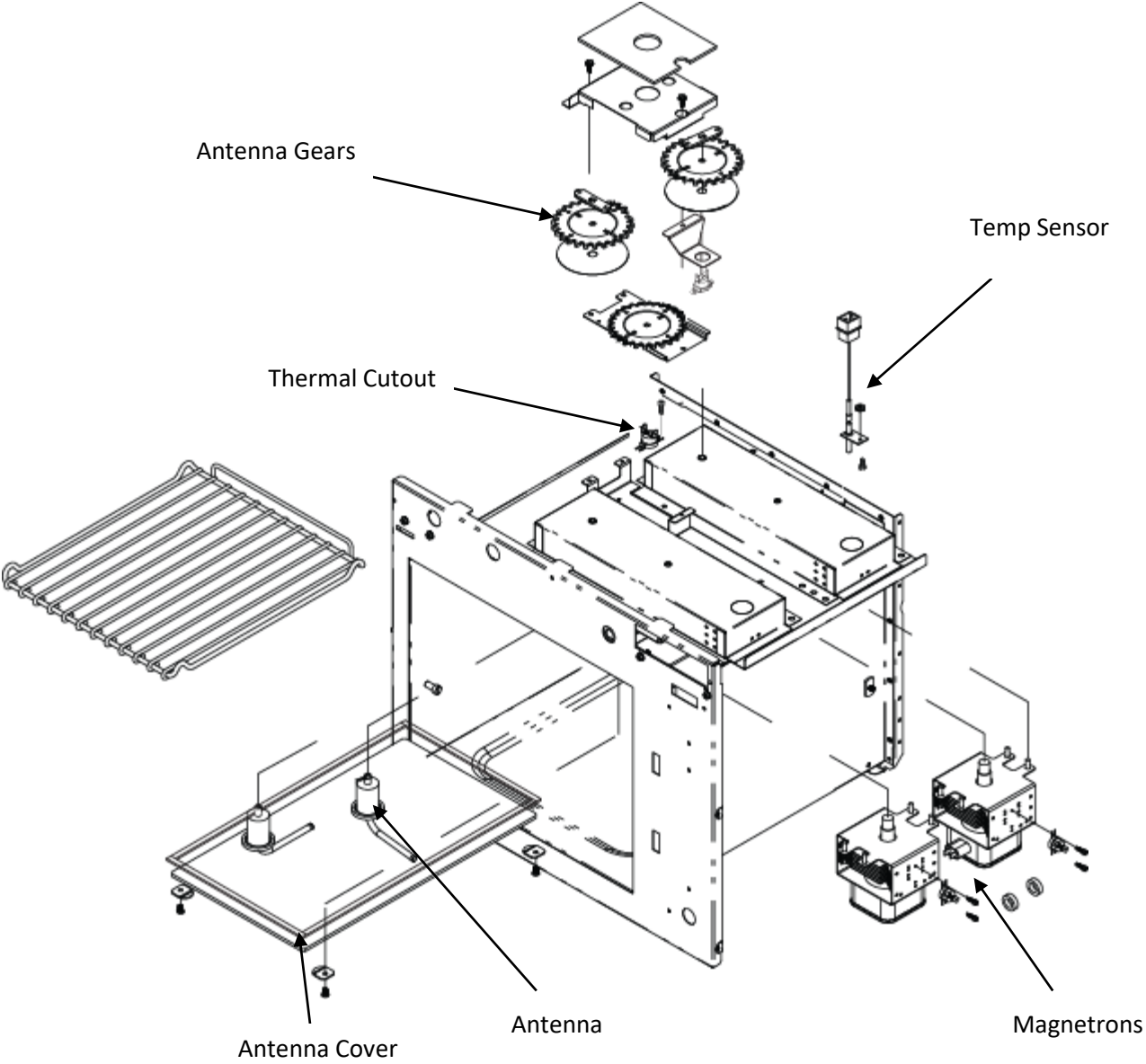
LOWER ACCESS PANEL and Fuse

Note: 3 Phase Model Shown

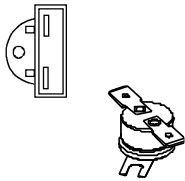

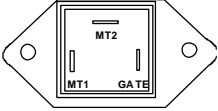
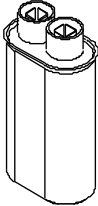

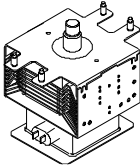


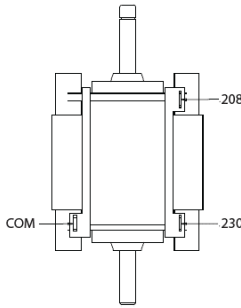
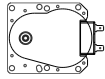
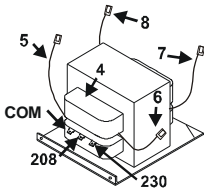
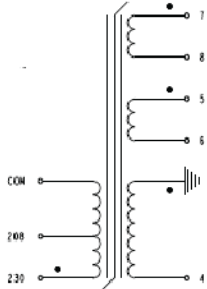
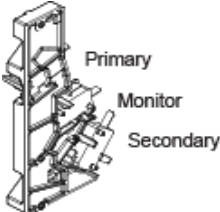

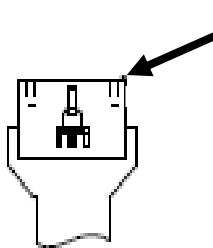
OVEN CONSTRUCTION

MAGNETRONS, STIRRER SYSTEM and TEMP SENSORS



COMPONENT TESTING

Illustration	Component	Testing	Results
	Thermal Cutouts	Disconnect all wires from TCO. Measure resistance across terminals. Cavity Thermal Fuse Magnetron TCO	Open at 104° C (219° F). Open at 138° C (280° F) and Closed at 82° C (180° F).
	Diodes	Discharge Capacitors Remove diode lead from capacitor and connect ohmmeter. Reverse leads for second test.	Infinite resistance should be measured in one direction and 50KΩ or more in the opposite direction. NOTE: Analog meter must contain a battery of 6 volts minimum.
	Triac	Disconnect wires to triac. Measure resistance from: MT1 to MT2 MT1 to Gate MT2 to Gate All terminals to ground	Caution - Do not operate oven with wire to terminal MT2 removed. Infinite. Approximately 60 Ω or more. Infinite Infinite.
	Capacitor	Discharge Capacitors Remove wires from capacitor terminals and connect ohmmeter, set on highest resistance scale to terminals. Also check between each terminal and capacitor case.	Between Terminals: Meter should momentarily deflect towards zero then return to over 5 MΩ. If no deflection occurs, or if continuous deflection occurs, replace capacitor. Terminal to Case: Infinite resistance. ALWAYS USE CORRECT SIZE
	Snubber Assembly	Disconnect wires to snubber. Measure resistance across terminals..	Infinite.
	Magnetron	Discharge Capacitors Remove wires from magnetron and connect ohmmeter to terminals. Also check between each terminal and ground.	Between Terminals: Less than 1 Ω. Each terminal to ground measures Infinite resistance. NOTE: This test is not conclusive. If oven does not heat and all other components test good replace the magnetron and retest.

	<p>Blower Motor</p>	<p>Remove all wires from motor.</p> <p>Measure resistance COM to 208</p> <p>Measure resistance COM to 230</p> <p>Measure resistance 208 to 230</p>	<p>Approx 23Ω</p> <p>Approx 26Ω</p> <p>Approx 3Ω</p>
	<p>Stirrer Motor- 25RPM</p>	<p>Remove all wires from motor.</p> <p>Measure coil resistance</p>	<p>Approximately 25k Ω.</p>
	<p>Transformer</p> 	<p>Discharge Capacitor Remove all wires from terminals, and measure resistance from:</p> <p>230 to Common.....</p> <p>208 to Common.....</p> <p>Terminal 5 to 6.....</p> <p>Terminal 7 to 8.....</p> <p>Terminal 4 to Ground</p>	<p><1 Ω.</p> <p><1 Ω.</p> <p><1 Ω.</p> <p><1Ω</p> <p>27Ω ±10%</p>
	<p>Interlock Switch Assembly</p>	<p>Disconnect wires to switch.</p> <p>With door open measure resistance from:</p> <p>Primary – Terminals.....</p> <p>Monitor – Terminals.....</p> <p>Secondary – Terminals.....</p> <p>With door closed measure resistance from:</p> <p>Primary – Terminals.....</p> <p>Monitor – Terminals.....</p> <p>Secondary – Terminals.....</p>	<p>Open/Infinite Ω</p> <p>Closed/Continuity</p> <p>Open/Infinite Ω</p> <p>Closed/Continuity</p> <p>Open/Infinite Ω</p> <p>Closed/Continuity</p>
	<p>Touch Panel Assembly</p>	<p>Disconnected from Main Board</p> 	<p>Pad Traces 0-150 ohms</p> <p>UP TRIANGLE PIN 1 to 3 to 4</p> <p>DOWN TRIANGLE PIN 1 to 5 to 6</p> <p>POWER/PLUS PIN 1 to 5 to 8</p> <p>MENU PIN 1 to 5 to 9</p> <p>1 PIN 1 to 3 to 5</p> <p>2 PIN 1 to 3 to 6</p> <p>3 PIN 1 to 3 to 7</p> <p>4 PIN 1 to 3 to 8</p> <p>5 PIN 1 to 3 to 9</p> <p>6 PIN 1 to 4 to 5</p> <p>7 PIN 1 to 4 to 6</p> <p>8 PIN 1 to 4 to 7</p> <p>9 PIN 1 to 4 to 8</p> <p>0 PIN 1 to 4 to 9</p> <p>GREY STOP PIN 1 to 5 to 6</p> <p>GREEN CHECK PIN 1 to 6 to 9</p>

SERVICE MODE

TO ENTER SERVICE MODE:

1. Press the Menu Pad. Menu Setting Prompt Appears
2. Press the Scroll Down Pad
3. Press “2”. “Service Menu” (five choices appear)
4. At the Pin Prompt, Enter 1,3,5,7,then 9. (the first page of two will appear)

SCROLL
UP



MENU



Software Version is displayed.

1. Usage
 - a. Door Cycles
 - b. Tube Cycles
 - c. Tube Hours
2. Error History. Displays any Accumulated Error Codes with the most Recent at the Top.
3. Pin Code. Reveals Pin Code Set for Programming
4. Export to USB. Exports the Usage Information, Error History, and Recipe/Settings File to a USB Flash Drive. *Note: The Recipe/Settings File will be in .xml format. Usage and Error History will be in .txt formats.*
5. Voltage Sensing (*Disabled on some Models and should not be tampered with unless Factory advised*)
 - 1 – Force 208
 - 2 – Sense (DEFAULT)
 - 3 – Force 230



Press the “Scroll Down” Pad (five more choices appear)

1. Temp Offset For Oven Temperature Calibration. A Positive Offset equals a Hotter Oven. Offset is always displayed in Fahrenheit. Range is -40 to +40.
2. Heater. Start and Stop the Heating Element for Service Testing
3. Magnetron. Displays High Voltage System Amperage when Started. Normal Range approximately 15 Amps. Start and Stop the System for Service Testing
4. Convection Fan. Start and Stop the Convection Fan Motor for Service Testing.
5. Cooling Fan. Start and Stop the Convection Fan Motor for Service Testing



UPDATING FIRMWARE

TO ENTER SERVICE MODE:

1. Insert USB with New Firmware into the USB Port *Note: The firmware file must be loaded on a USB Flash Drive, saved in the root directory of the drive, and not located in a folder.*
2. Press the Menu Pad. Menu Setting Prompt Appears
3. Press the Scroll Down Pad
4. Press “2”. “Service Menu” (five choices appear)
5. At the Pin Prompt, Enter 1,3,5,7,then 9.
6. Press and Hold the “7” Pad for three (3) seconds to Initiate the Update.



ALTERNATE METHOD

1. Remove Power from Oven
2. Insert USB with New Firmware into the USB Port *Note: The firmware file must be loaded on a USB Flash Drive, saved in the root directory of the drive, and not located in a folder.*
3. Hold the Stop/Reset while Power is Restored and the Firmware Update will Initiate.



POWER OUTPUT TEST

All Amana and Menumaster microwave oven power outputs are rated using the IEC705 standards. Using the IEC705 test method requires precision measurements and equipment that is not practical to be performed in the field. Using the test shown below will indicate if the oven performance is satisfactory.

Test equipment required:

- 1000 ml test container and thermometer (Amana power test kit Fahrenheit / Menumaster power test kit Celsius).
- Digital watch / watch with a second hand for use on ovens with electromechanical timers.

Important Notes:

- Low line voltage will cause low temperature rise / power output.
- Ovens must be on a dedicated circuit, properly grounded, and polarized. Other equipment on the same circuit may cause a low temperature rise / power output.
- This test and results are not a true IEC705 test procedure and are only intended to provide servicers with an easy means of determining if the microwave oven cooking output is correct.

Procedure

1. Fill the test container to the 1000 ml line with cool tap water.

NOTE: Water temperature should be approximately 60° F / 16° C.

2. Using the thermometer, stir water for five to ten seconds; measure, and record the temperature (T1).
3. Place test container of water in the center of oven cavity and close door.
4. Heat the water for a 33-second full power cycle.

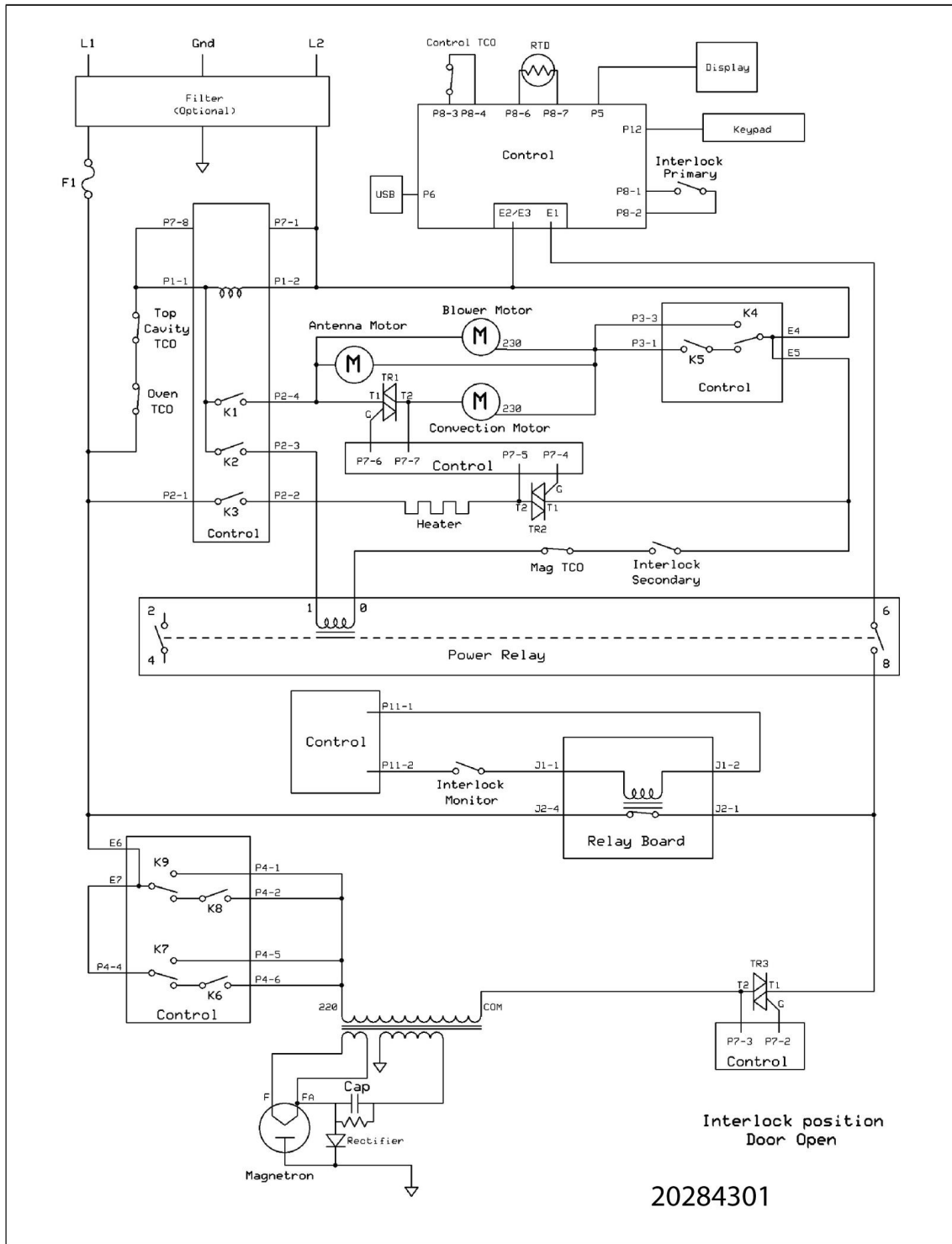
NOTE: Use a digital watch or a watch with a second hand for ovens with electromechanical timers.

1. At end of the cycle, remove test container. Using the thermometer, stir water for five to ten seconds and record temperature (T2).
2. Subtract the starting water temperature (T1), from the ending water temperature (T2) to obtain the temperature rise (ΔT).
3. If the temperature rise (ΔT) meets or exceeds the minimum, the test is complete. If the temperature rise (ΔT) fails to meet the minimum temperature rise, test the line voltage to verify it is correct. Then repeat steps 1-6 making sure to change the water. If the temperature rise (ΔT) fails to meet the minimum temperature rise again the oven will require service.

Minimum Temperature Rise at Thirty-Three (33) Seconds Run Time

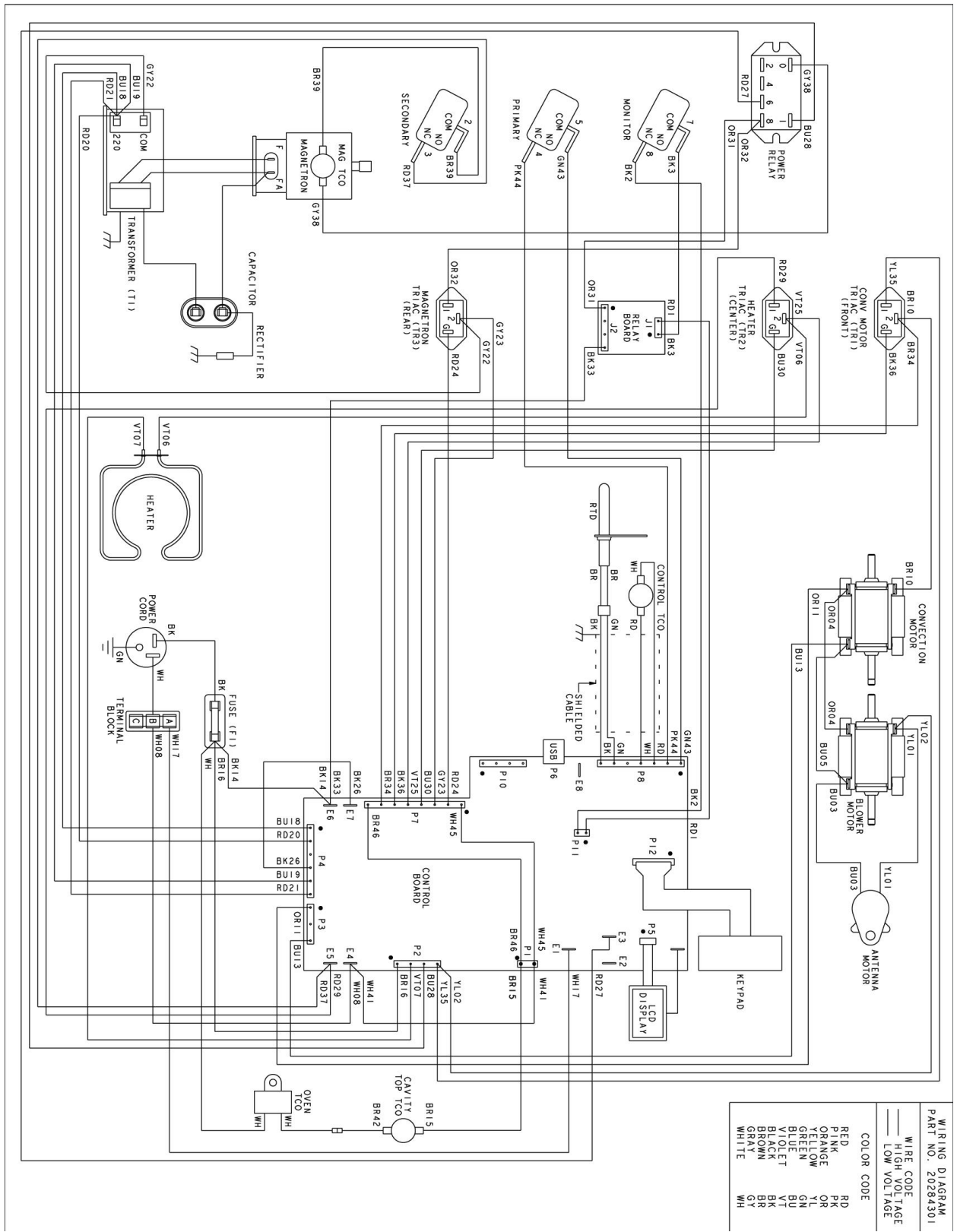
ΔT (°F)	Cooking Power Output	ΔT (°F)	Cooking Power Output	ΔT (°C)	Cooking Power Output	ΔT (°C)	Cooking Power Output
10	1000	20	2000	5	1000	11	2000
11	1100	21	2100	5.5	1100	11.5	2100
12	1200	22	2200	6.5	1200	12	2200
14	1400	24	2400	7.5	1400	13	2400
17	1700	25	2500	9.5	1700	13.5	2500
18	1800	27	2700	10	1800	15	2700
19	1900	30	3000	10.5	1900	16.5	3000

WIRING AND SCHEMATIC DIAGRAMS



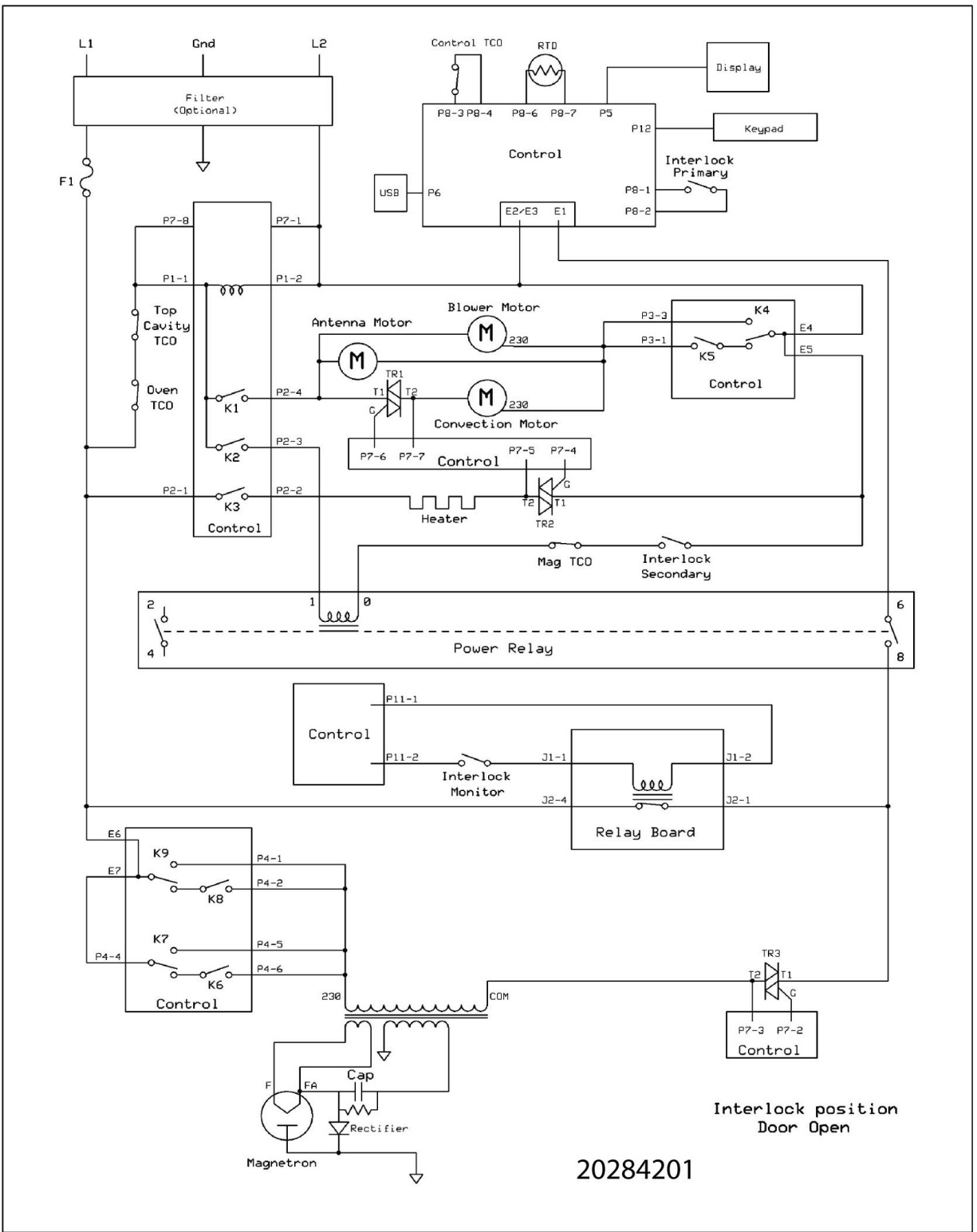
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JET10V P2007632M



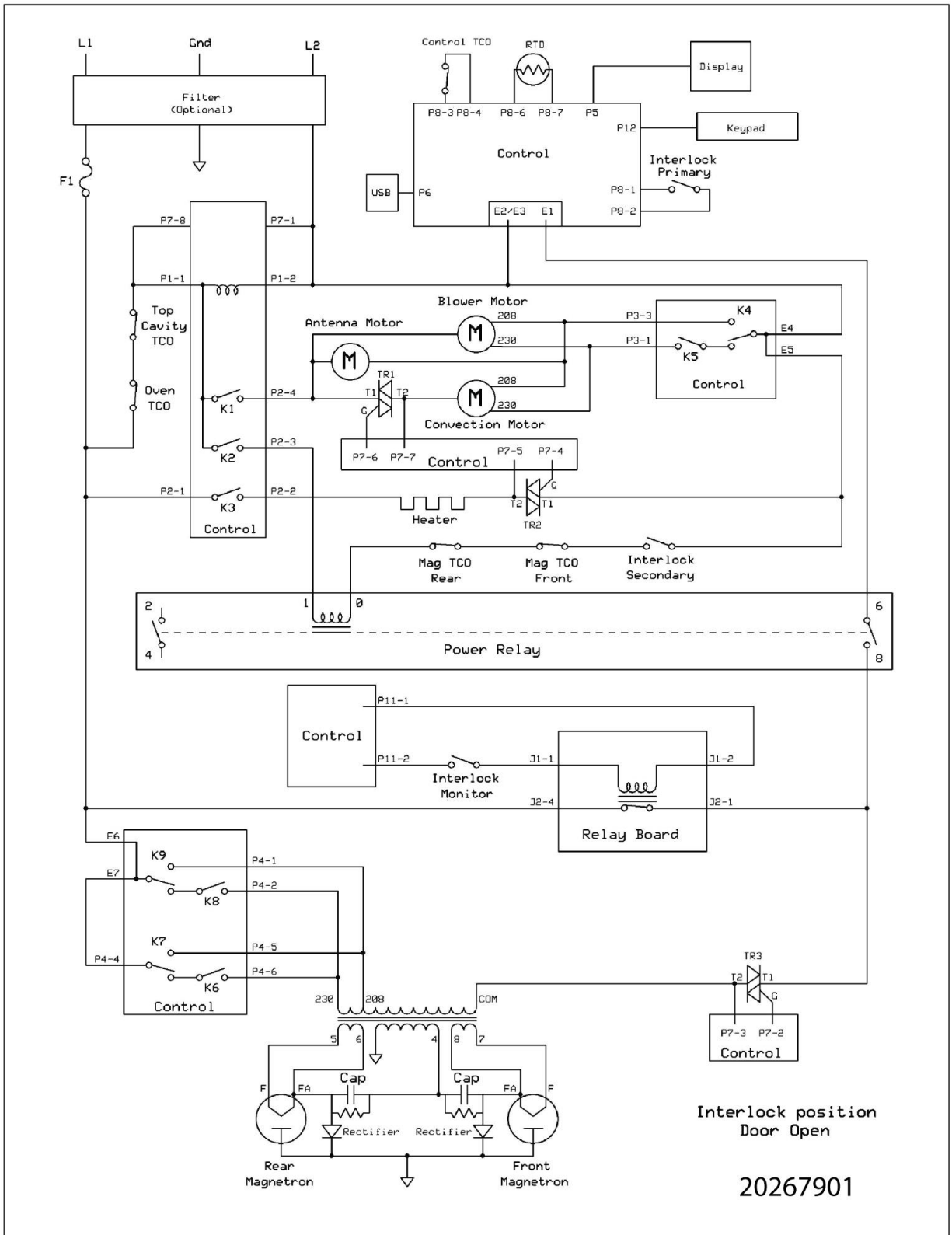
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JET510 P2007633M

JET510V P2007634M



JET14 P2007603M

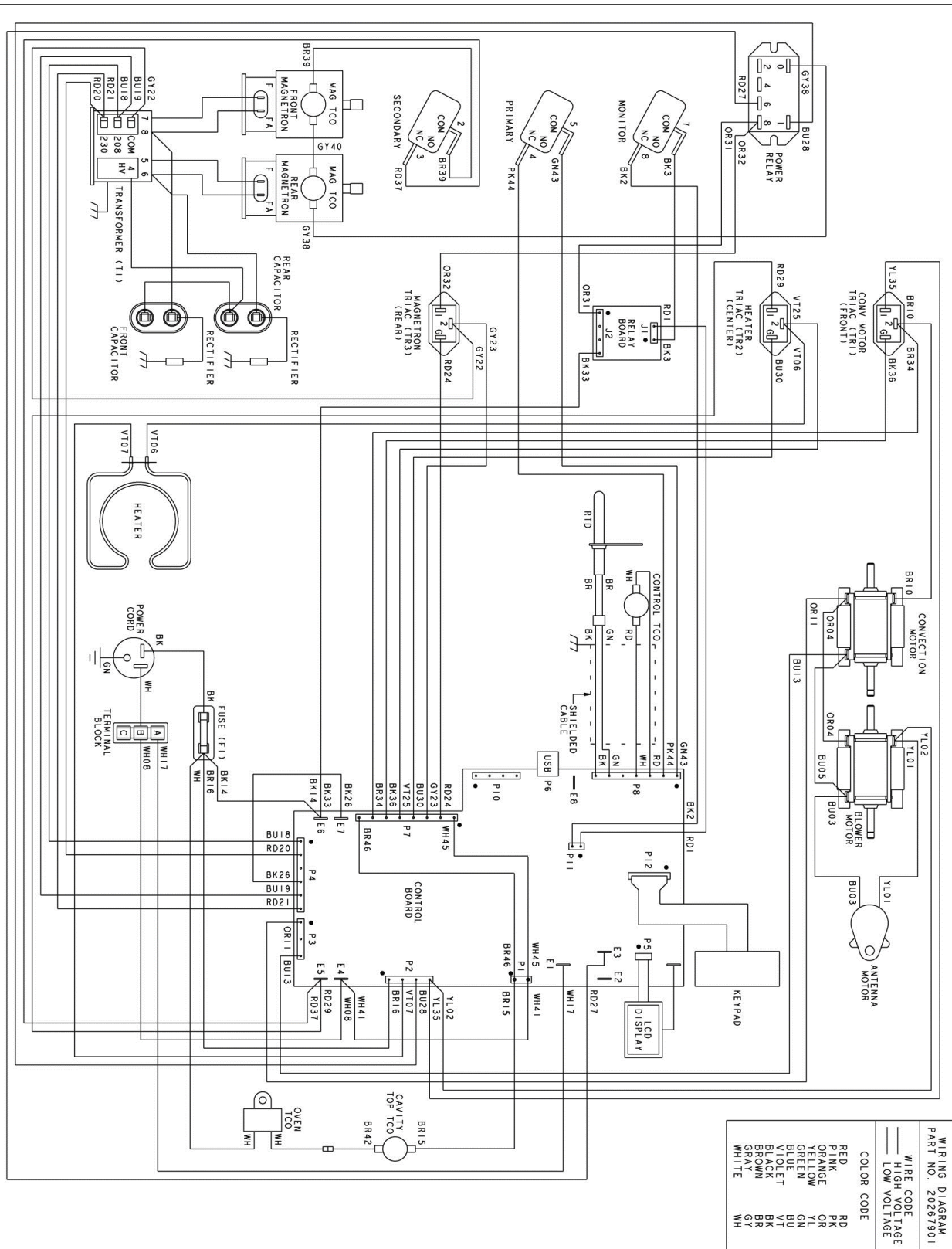
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JET19V P2007611M

JET19VTG P2007612M

JET19P P2007621M



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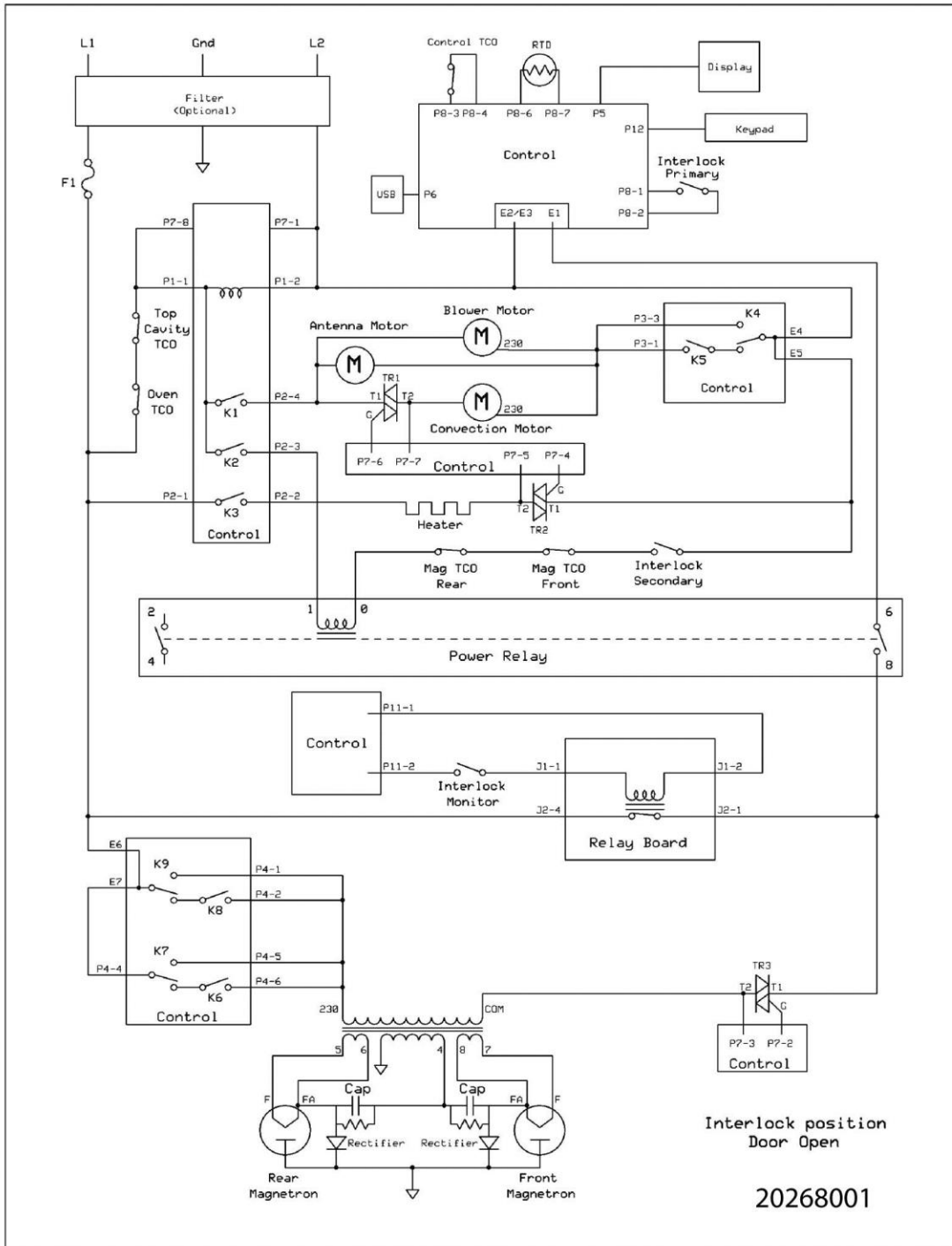
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JET14VSA P2007625M

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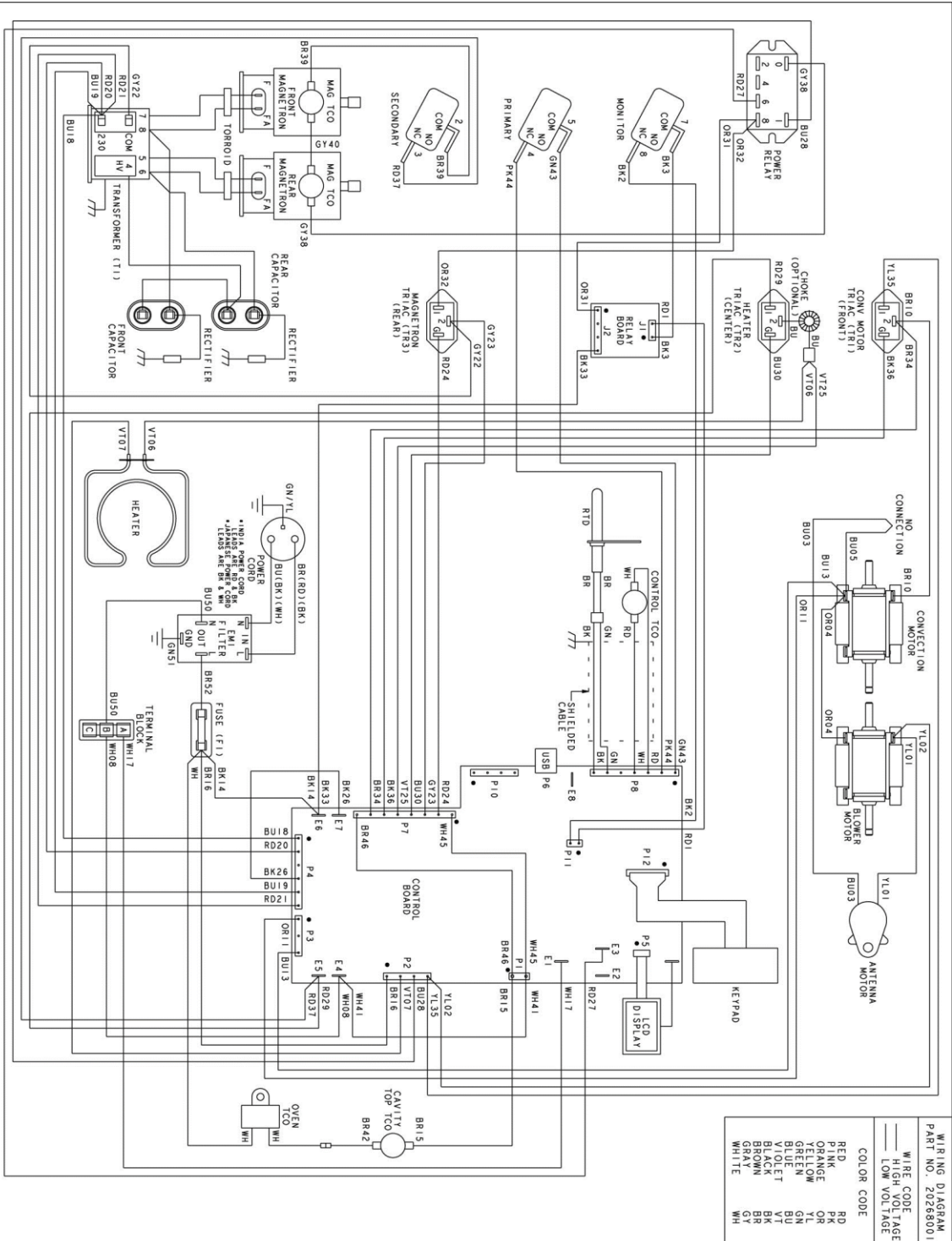
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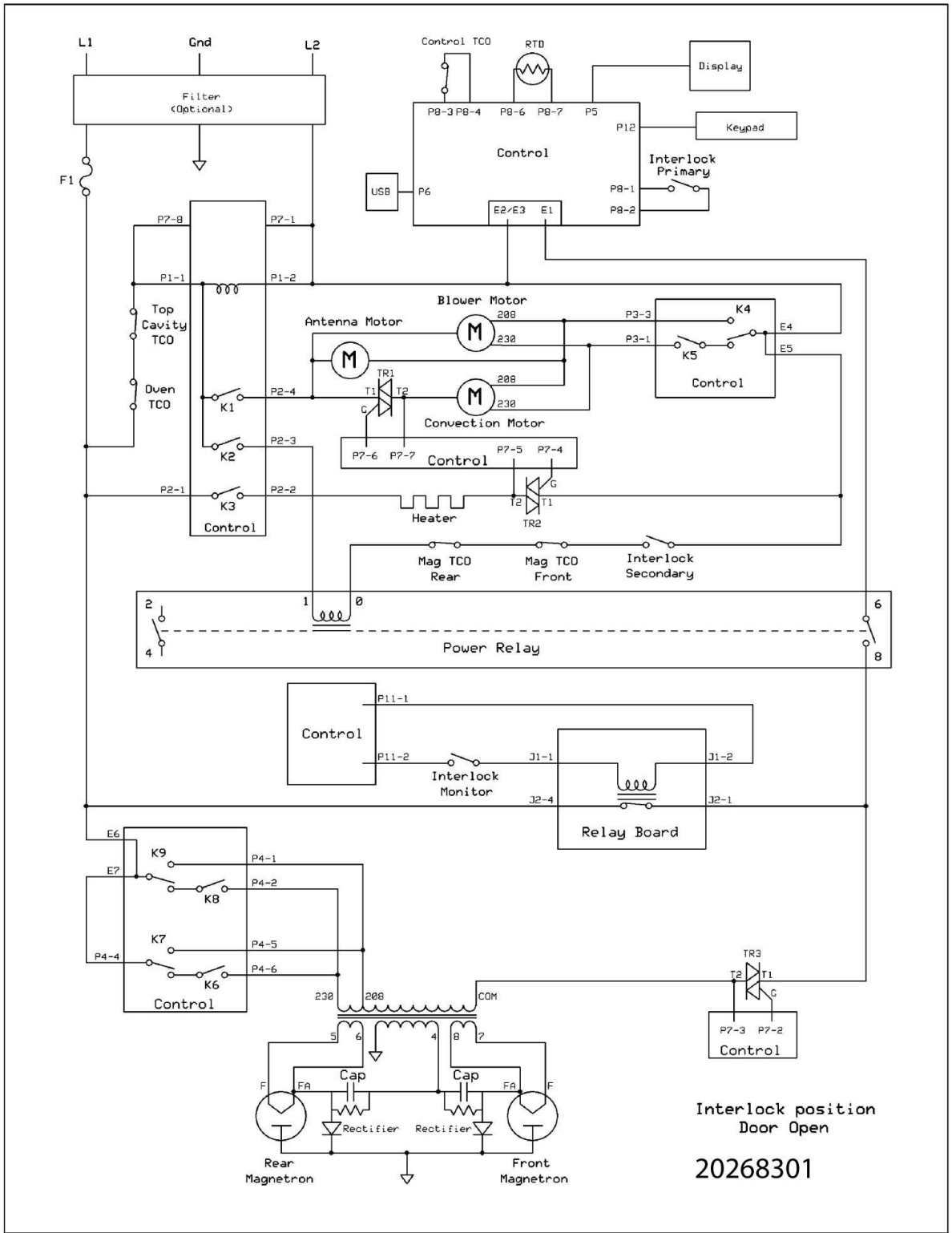
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JET519V2 P2007617M



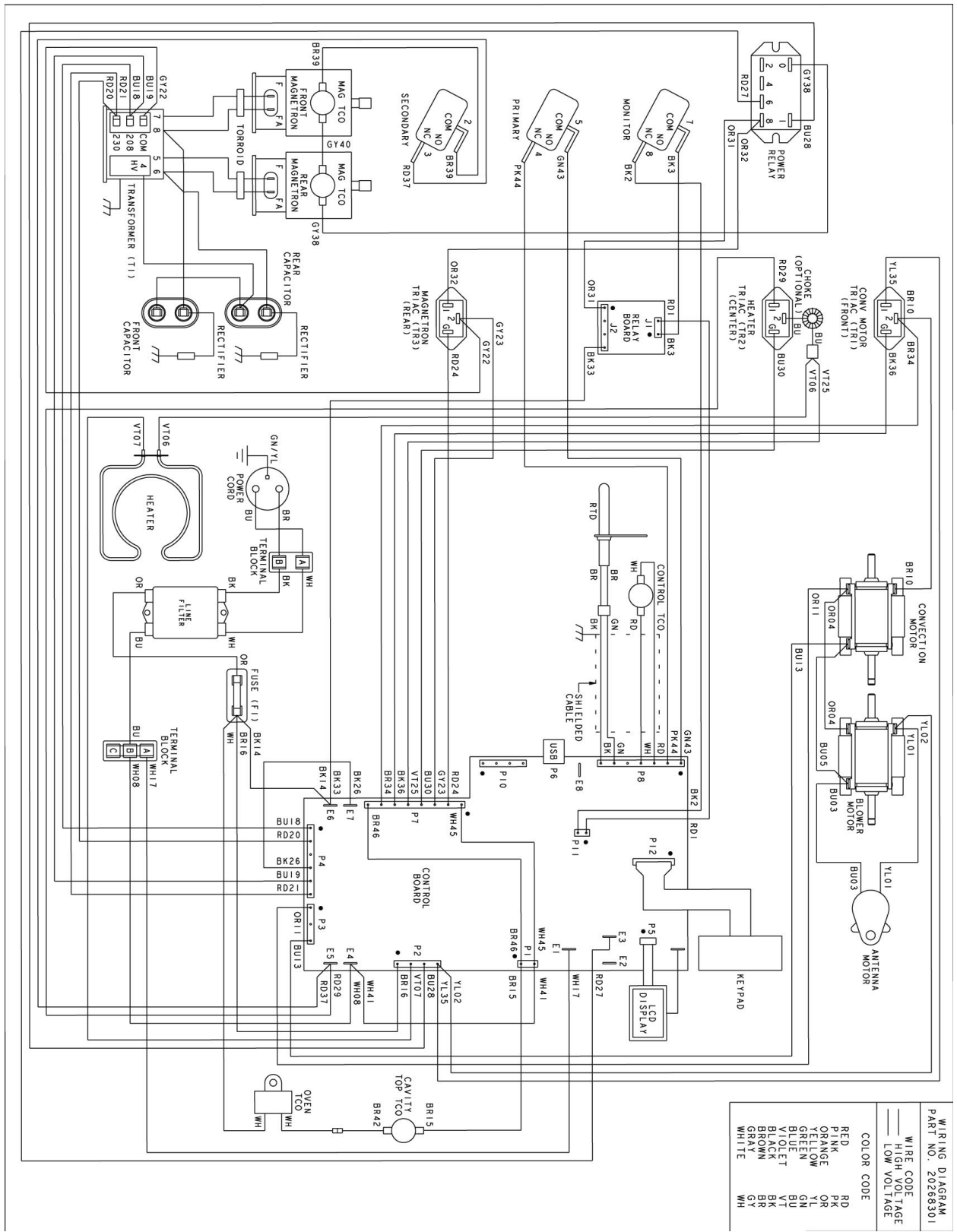
WIRING DIAGRAM
 PART NO. 20268001
 WIRE CODE TAG
 HIGH VOLTAGE
 LOW VOLTAGE
 COLOR CODE
 RD RED
 PK PINK
 OR ORANGE
 YE YELLOW
 YL YELLOW
 GR GREEN
 BL BLUE
 VT VIOLET
 BK BLACK
 BR BROWN
 WH WHITE

- | | | | |
|----------|-----------|-----------|-----------|
| JET14VSA | P2007625M | JET514 | P2007604M |
| JET514A | P2007627M | JET514BL | P2007628M |
| JET514C | P2007613M | JET514I | P2007606M |
| JET514U | P2007614M | JET514V | P2007602M |
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| JET519V2 | | P2007617M | |



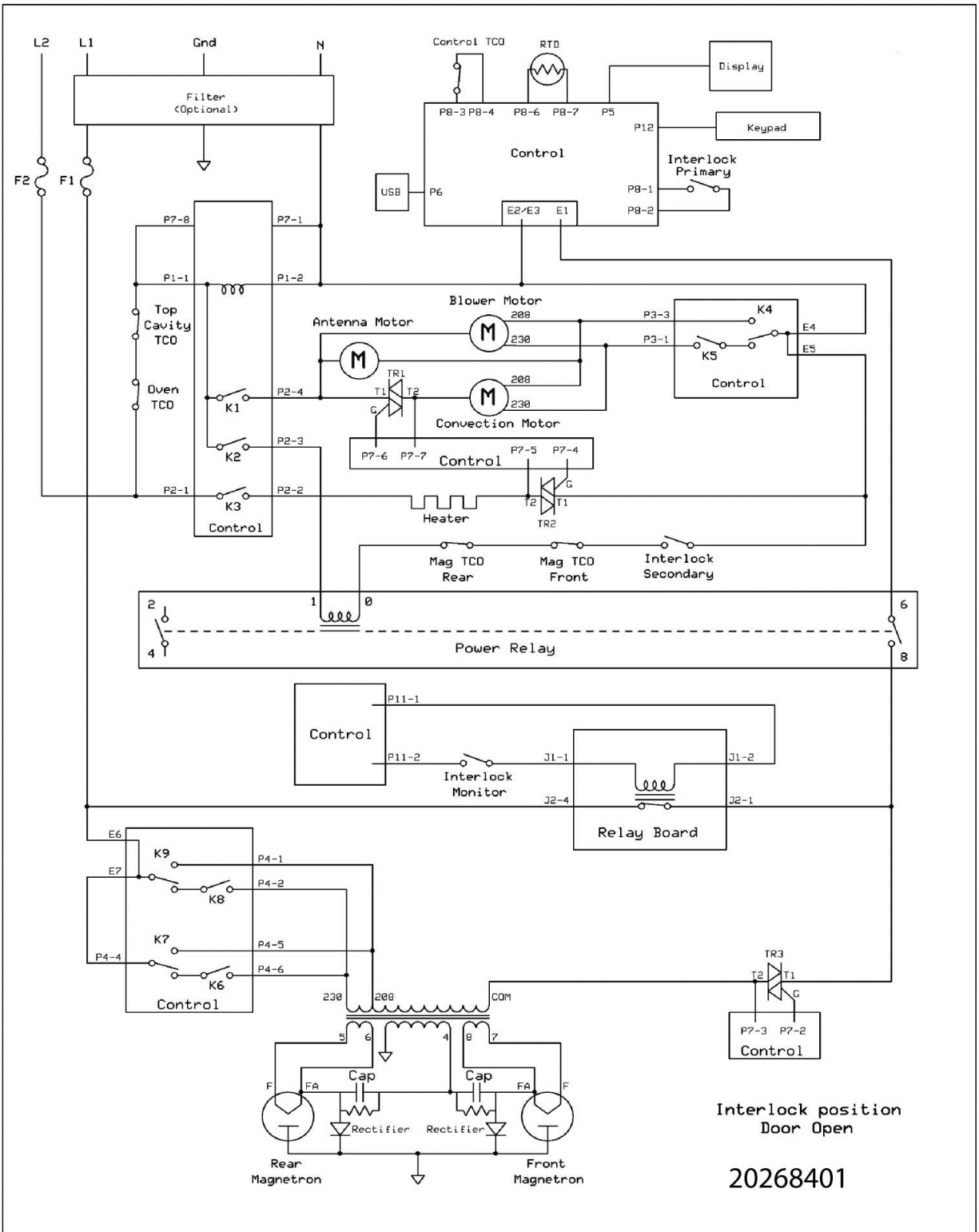
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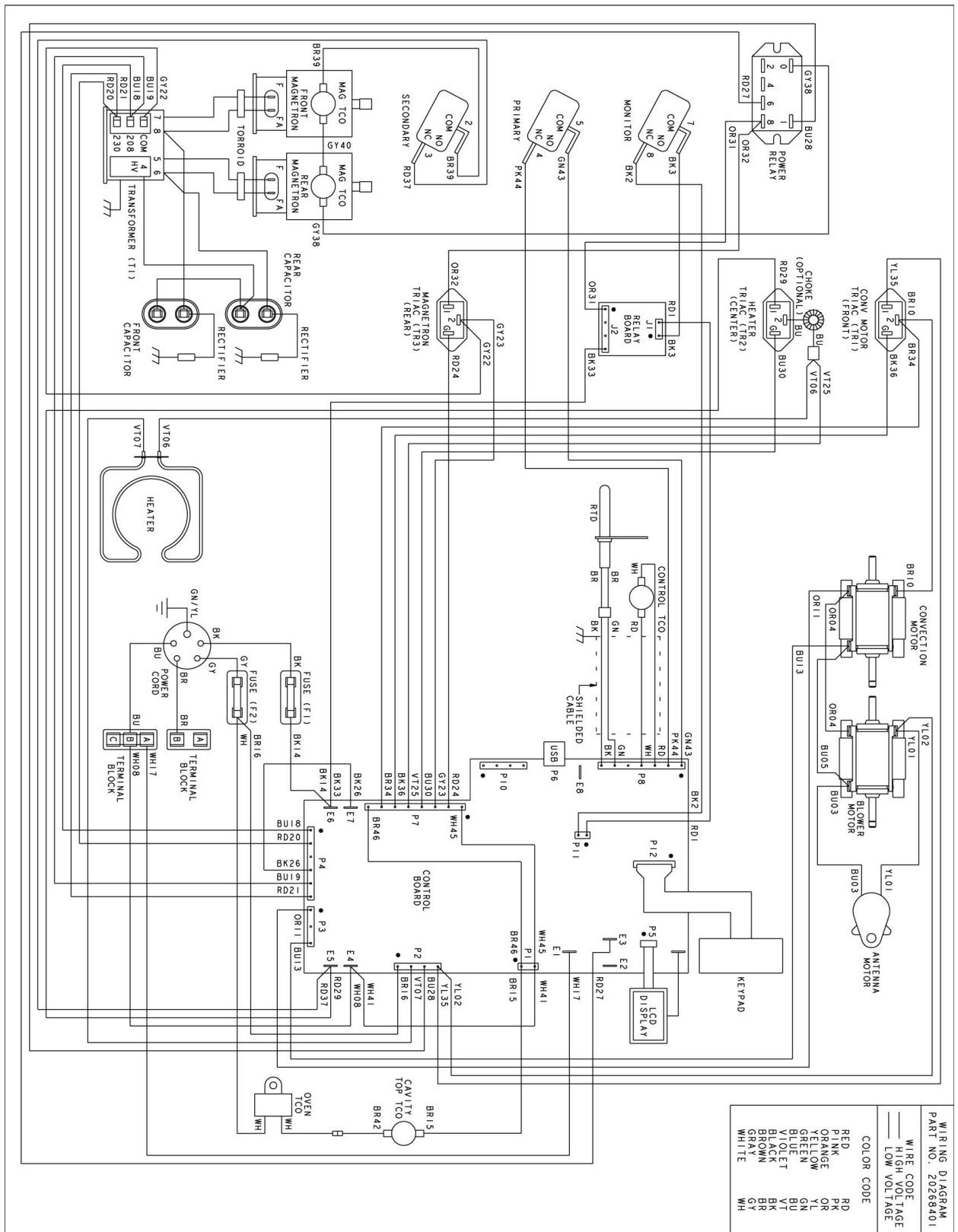


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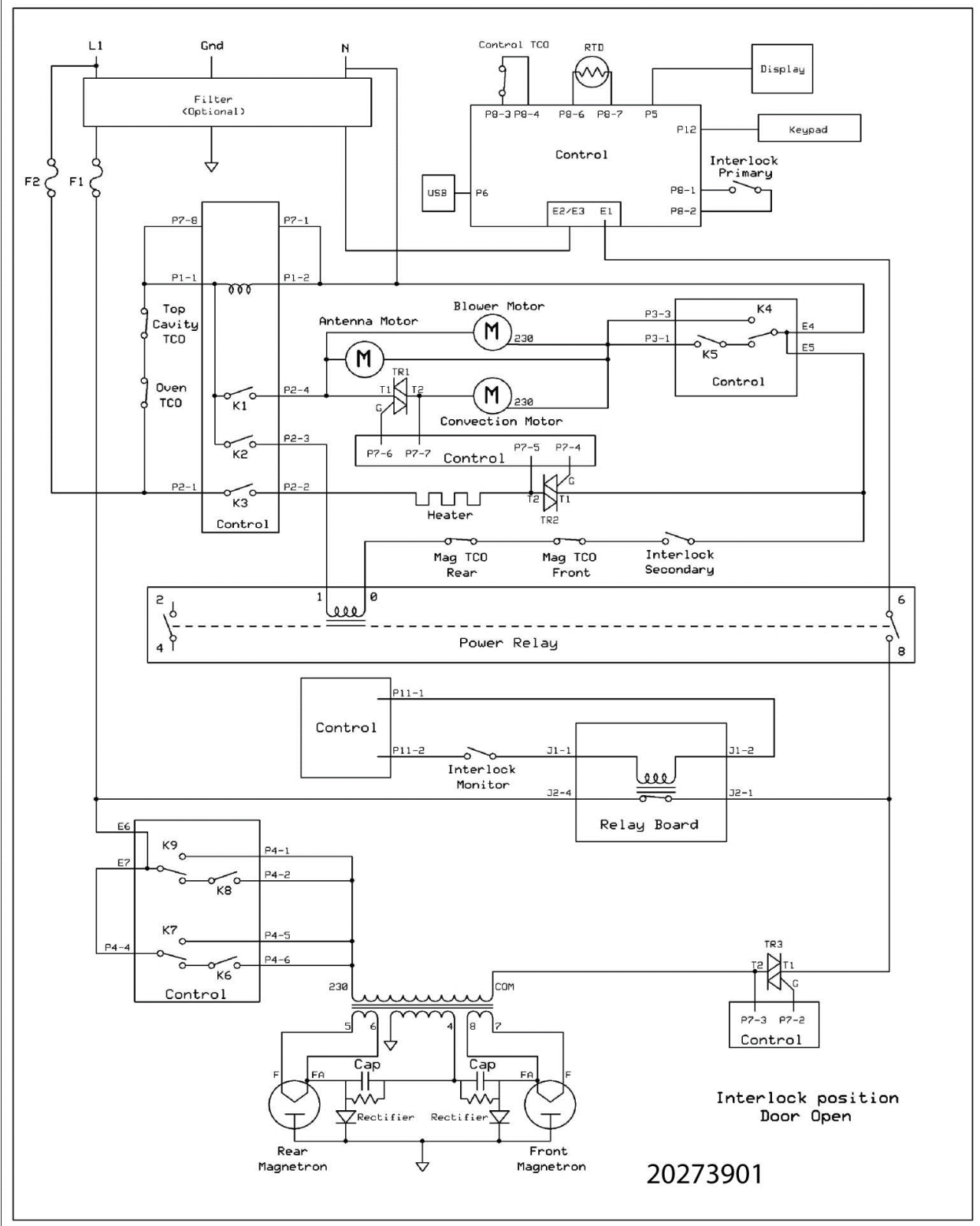
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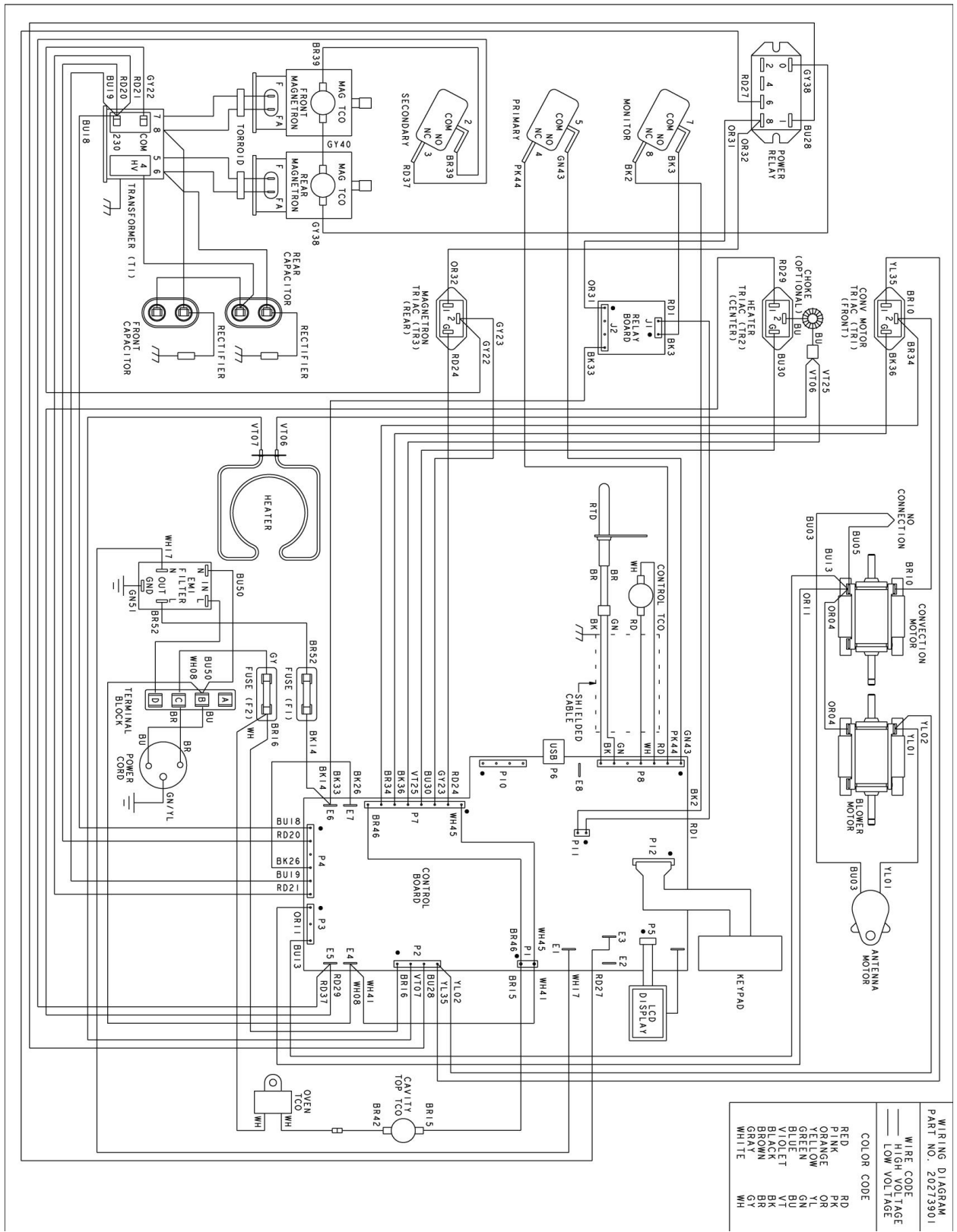
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JET14VT P2007624M



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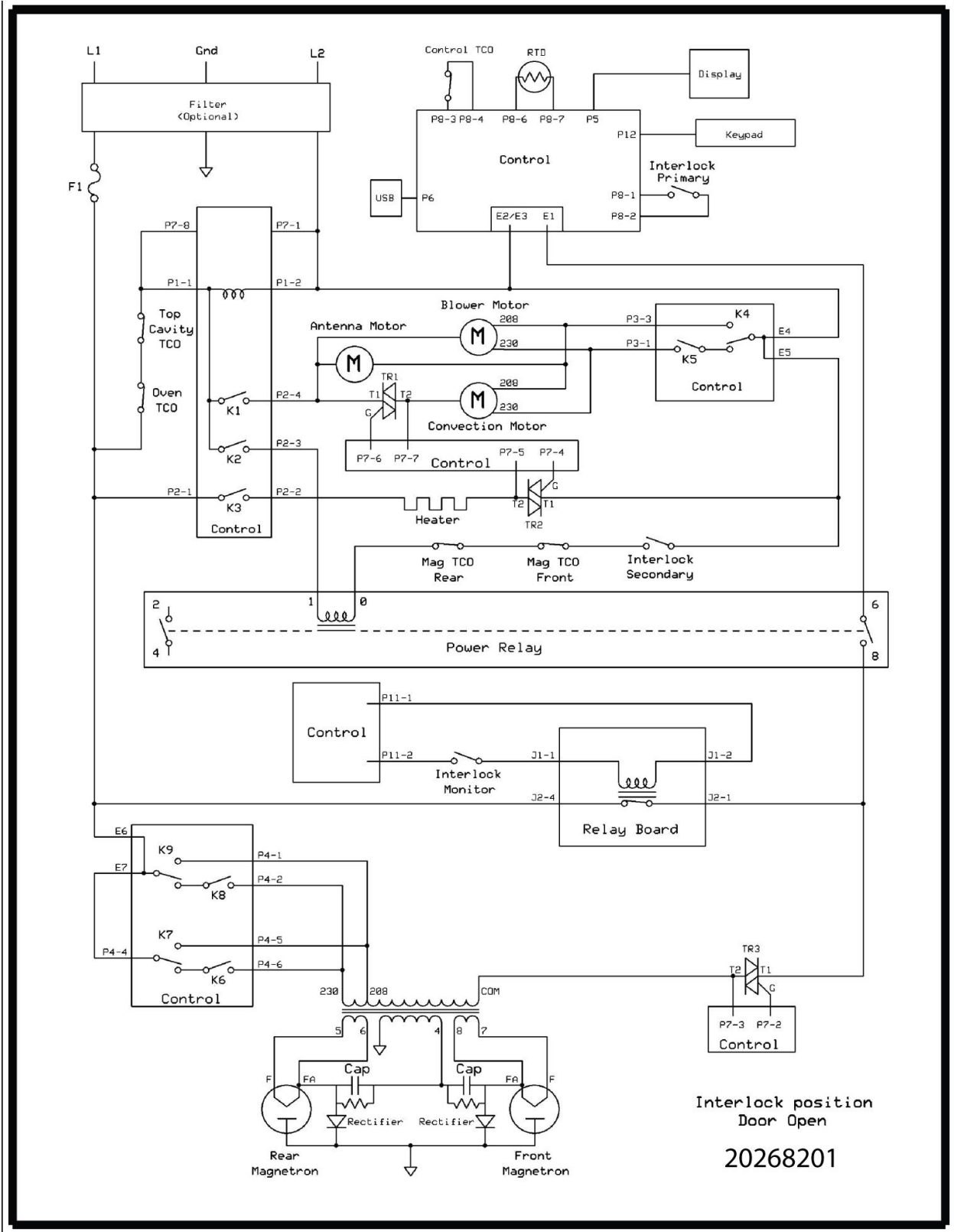


WIRING DIAGRAM
PART NO. 20273901

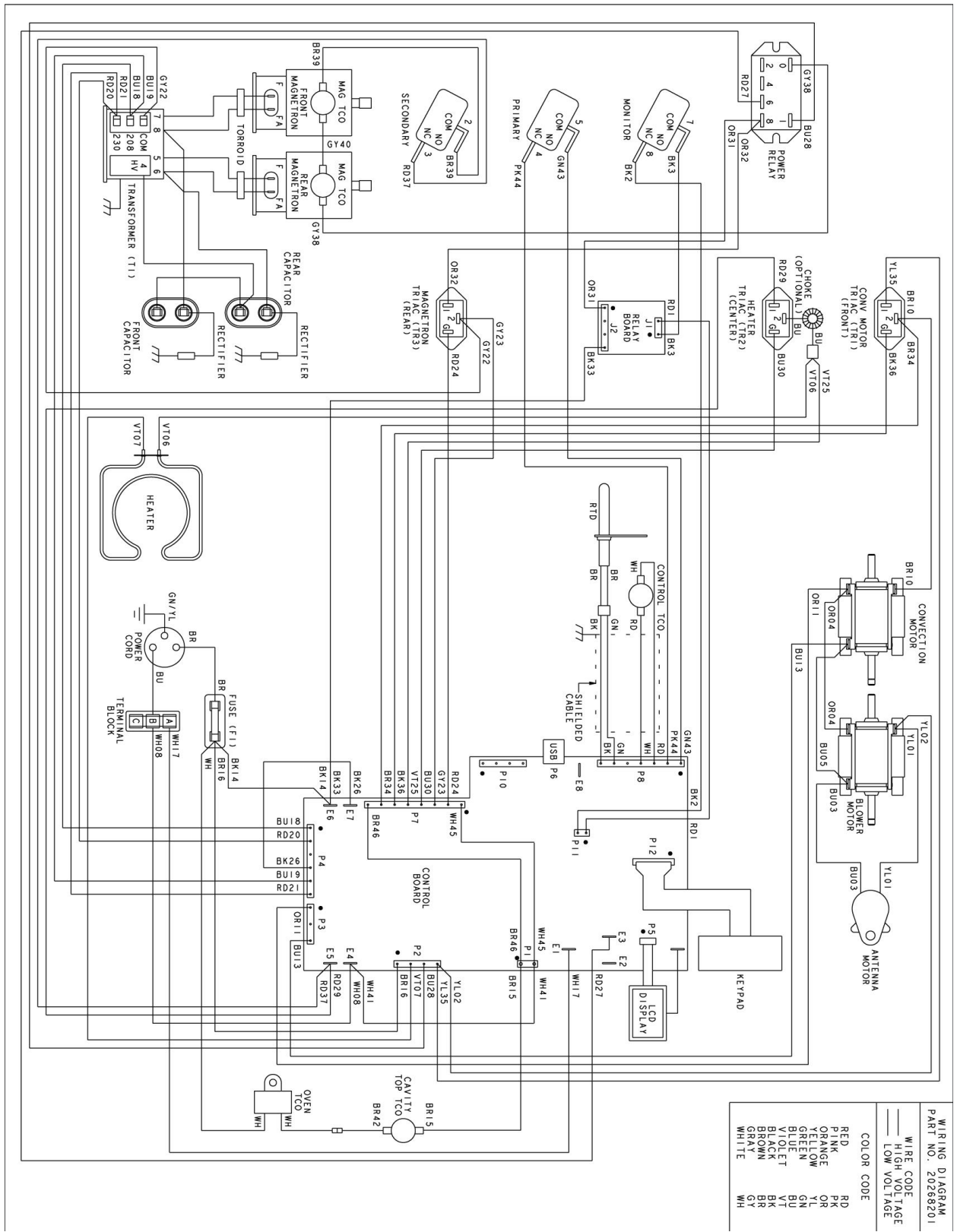
WIRE CODE	
—	HIGH VOLTAGE
---	LOW VOLTAGE

COLOR CODE	
RD	RED
PK	PINK
OR	ORANGE
YL	YELLOW
GN	GREEN
BU	BLUE
VT	VIOLET
BR	BROWN
GY	GRAY
WH	WHITE

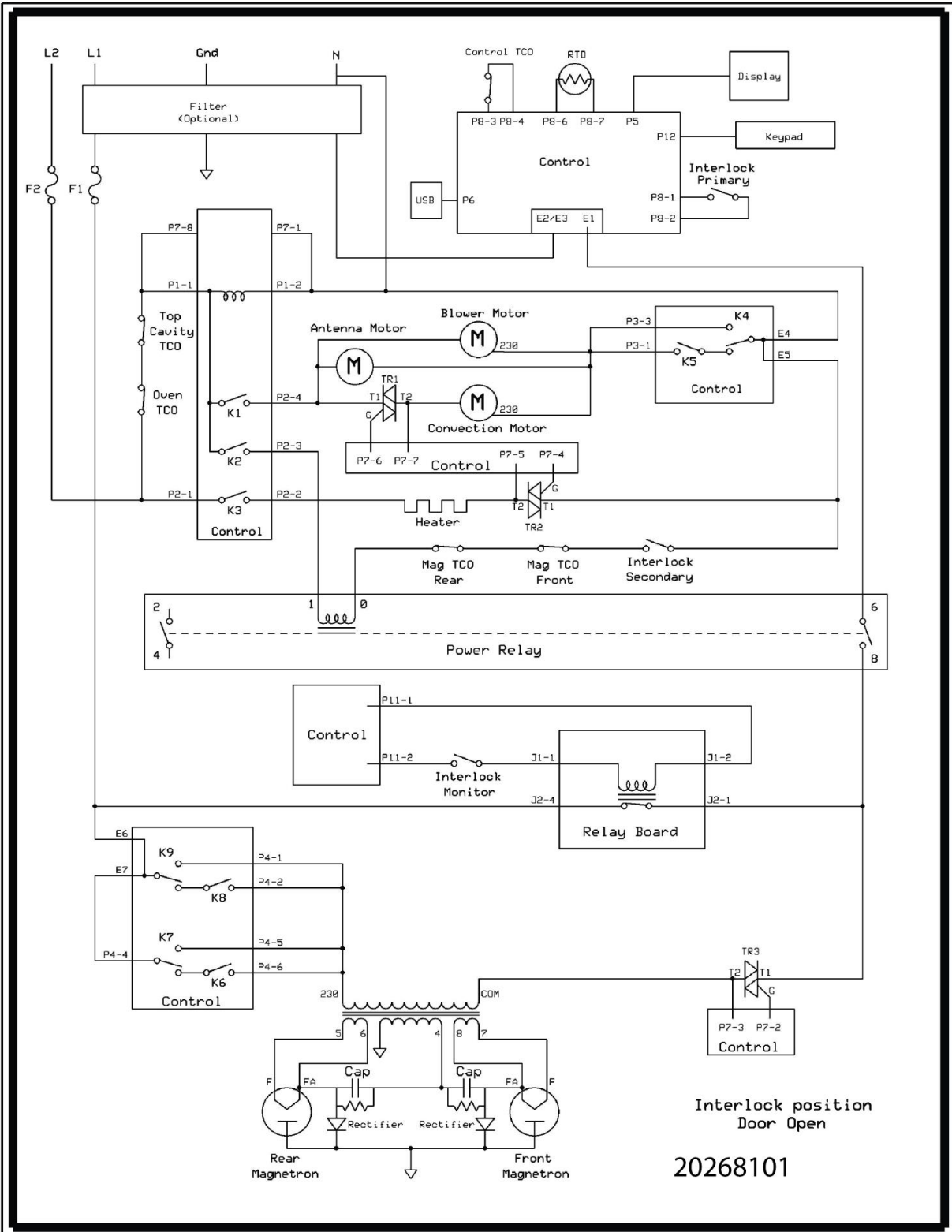
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JET14B P2007620M

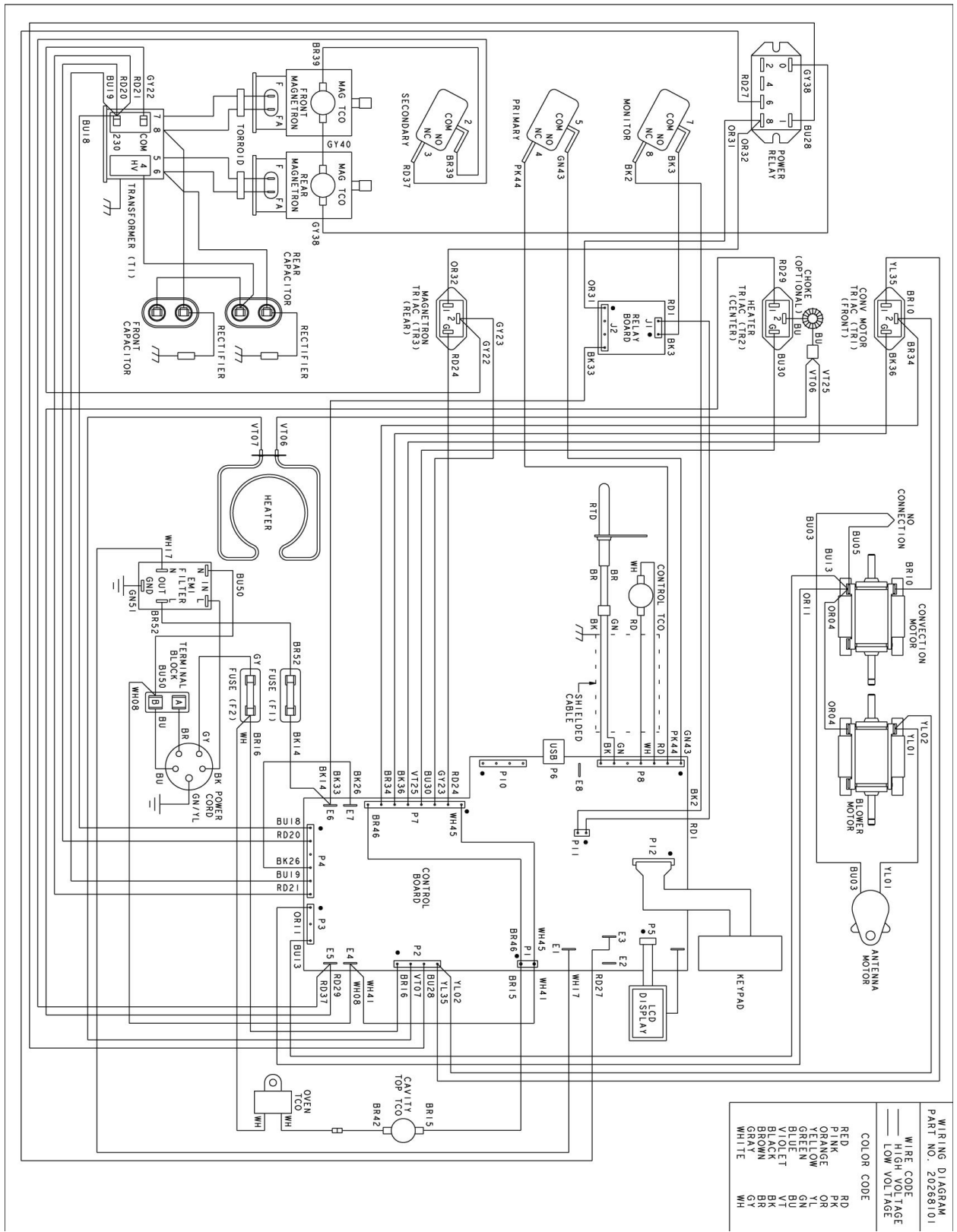


JET14B P2007620M



JET5193 P2007618M

JET519V3 P2007619M



JET5193 P2007618M

JET519V3 P2007619M