SERVICE MANUAL

CHEF'S COMBI OVENS GAS AND ELECTRIC

CHEF - 61E (VICS61E)
CHEF - 61G (VICS61G)
CHEF - 62G (VICS62G)
CHEF - 62E (VICS62E)
CHEF - 101E (VICS101E)
CHEF - 101G (VICS101G)
CHEF - 102E (VICS102E)
CHEF - 102G (VICS102G)

- NOTICE -

This Manual is prepared for the use of trained Hobart Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Hobart Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Hobart Service Technician.

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A product of Vulcan-Hart
3600 North Point Blvd Baltimore, MD 21222
F46033 Rev. C (0226)

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1. GENERAL

SERVICE UPDATES

February 2026

- Updated TOOLS.
- Updated BOARD CONNECTOR / FUSE LOCATIONS.
- Updated ERROR CODES.
- Updated ELECTRIC - COMPONENT LAYOUT AND FUNCTION.
- Updated GAS - COMPONENT LAYOUT AND FUNCTION.
- Updated GAS - GAS VALVE ADJUSTMENT.
- Updated OVEN LIGHTING FAULT OF COOKING CAVITY.
- Updated PARAMETERS.
- Updated MAINTENANCE INTERVENTION FREQUENCY, DAILY USAGE RATE.
- Updated RESET IN SAFE MODE.
- Updated GAS - COMBUSTION ANALYSIS.
- Udpated CONVECTION MOTOR RESISTANCE.
- Updated ELECTRIC - DIAGRAMS and GAS - DIAGRAMS.
- Updated BOARD CONNECTOR / FUSE LOCATIONS.
- Updated COMPONENT REFERENCE ABBREVIATIONS.
- Replaced "igniter" with "spark box" in multiple chapters.

September 2025

- Added stacking installation vidoes to INSTALLATION AND OPERATION.
- Updated ELECTRIC - COMPONENT LAYOUT AND FUNCTION.
- Updated GAS - GAS VALVE ADJUSTMENT.

July 2025

- Updated LEFT PANEL.
- Updated DOOR.
- Updated STEAM GENERATOR WATER LEVEL SENSOR.
- Upated CAVITY WATER LEVEL SENSOR.
- Updated GAS VALVES
- Updated SET-UP SD CARD .
- Updated GAS - GAS VALVE ADJUSTMENT.
- Updated ELECTRIC - COMPONENT LAYOUT AND FUNCTION.
- Updated GAS - COMPONENT LAYOUT AND FUNCTION.
- Updated ERROR CODES.
- Updated DIAGNOSTIC HELP MODULE (MAINTENANCE SCREENS).
- Added OVEN SCREEN INOPERATIVE OR BLOCKED.
- Added OVEN LIGHTING FAULT OF COOKING CAVITY.
- Added ELECTRIC HEATER FAULT.

INTRODUCTION

The Chef's Combi oven is an innovative operating concept, based on smart phone operation, with a high-performance processor working in the background. This makes operation intuitive and very responsive. There are hardly any waiting times, especially when switching on or off. If desired, the user interface can be easily adapted to personal requirements.

Climate Control

This is the basis for outstanding cooking performance. The heat is distributed evenly and, if required, powerfully in the cooking cabinet, ensuring the best cooking results even when fully loaded. Fresh steam is supplied by the steam generator The high-performance dehumidification secures the desired crispiness.

Auto Climate

Auto Climate supports the user during manual cooking if required. Auto Climate sets the appropriate cooking climate depending on the cabinet temperature set.

Combi Guide

Combi Guide is the simple cooking assistant for reproducible cooking results, no matter who is at the helm. The user specifies how the food has to be cooked and Combi Guide automatically sets the ideal cooking climate. The load detection makes the appropriate adjustments. If necessary, the user can intervene at any time.

Menu Mix

Menu Mix monitors every level to the second. Simply load, set the timer and the Chef's Combi will let you know when the food is ready. If desired, Menu Mix can show which recipes go together. And of course, mixed loads can also be planned and saved accordingly. Everything is done to the point.

Cleaning

Automatic cleaning system with soiling detection and cleaning programs that can be ideally adapted to the degree of soiling. Usage of solid Cleaner-Tabs and easy to use Care-Sticks. After a short time, the cooking chamber, steam generator and drain are hygienically clean and free of lime scale. Thanks to its special technology, the Chef’s Combi requires little energy, few chemicals and little time.

INSTALLATION AND OPERATION

Chef Combi Installation Manual

Chef Combi Operation Manual

Chef Combi Stacking Installation

- Chef's Combi - Stacking Part 1 Video
- Chef's Combi - Stacking Part 2 Video
- Chef's Combi Stacking on a Stand Video

Condensation Hood Installation

Condensation Hood Service

SPECIFICATIONS

Chefs Combi - Vulcan Technical Data

Chef-61E Spec Sheet F49588 (02-25)

Chef-61G Spec Sheet F49587 (02-25)

Chef-62E Spec Sheet F49586 (02-25)

Chef-62G Spec Sheet F49589 (02-25)

Chef-101E Spec Sheet F49590 (02-25)

Chef-101G Spec Sheet F49591 (02-25)

Chef-102E Spec Sheet F49592 (02-25)

Chef-102G Spec Sheet F49593 (02-25)

TOOLS

Standard

- Standard set of hand tools.
    - Field service grounding kit.
    - Cutting tools.
    - Pliers (multi-socket, flat, cutting, stripping).
    - Measuring tools (tape measure, caliper, level).
    - Set of wrenches (flat, pipe, ratchet with sockets, channel lock, metric, standard, BTR).
- Metric set of hand tools.
- VOM with measuring micro amp current tester. Any VOM with minimum of CAT III 600V, CE certified. Sensitivity of at least 20,000 ohms per volt can be used. Ability to measure uF microfarids. In addition, meter leads must also be a minimum of CAT III 600V.
- Clamp on type amp meter with minimum of NFPA-70E CAT III 600V, UL/CSA/TUV certified.
- Temperature tester (thermocouple type).
- Proto hub puller or similar pulling tool.

Special

- Gas combustion analyzer and manometer.
    - Combustion analyzer Bacharach Fyrite Pro 125 Bacharach model# 24-8105 or Fyrite "Insight" Model 24-8251 or Equivalent.
    - Manometer U tube Part No. TL-84908 or equivalent. Water column or electronic pressure gauge.
- Set of jeweler's screwdrivers.
- Thumb (flash) drive.
- RECTORSEAL 5® or equivalent NSF rated thread sealant.
- Rod / Gauges:
    - Rod / gauge by 6mm diameter for electrode flame detection. 6mm allen wrench can be used.
    - Rod / gauge by 3mm and 4mm diameters for ignition electrodes. 3 mm and 4 mm allen wrench can be used.
- High Temperature Silicone.
- High Temperature Quality Grease.
- Loctite 567 (Water level probe installation.)
- Container for draining water (holds up to 3 quarts).
- Water control kit.
- Water pressure gage.
- Cable stripping tool for diameters 1 3/8" to 1 15/16" and 5/16" to 1 1/8".
- Torque wrench. (125 in/lb)
- Spray or electronic gas leak detector.
- Thickness gauges.
- Ratchet wrench.
- Socket wrench with 8 mm socket.
- Claw key with ½" to 3/4" opening for gas hoses and connections for grease collection option on some ovens.
- Torch - Propane or Heat Gun to assist convection fan removal.
- SD card: Mini 4GB / FAT32 formatted.

2. REMOVAL AND REPLACEMENT

LEFT PANEL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove left panel mounting screws (M5) from underneath.

Fig. 1

2. Unhook bottom of panel and lower to remove.
3. Reverse procedure to install.

RIGHT PANEL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove right panel mounting screws from underneath.

Fig. 2

2. Reverse procedure to install.

TOP COVER PANEL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove top cover panel mounting screws on back of oven.

Fig. 3

2. Reverse procedure to install.

REAR PANEL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Electric Models

1. Remove rear panel mounting screws from underneath.

Fig. 4

2. Reverse procedure to install.

Gas Models

1. Remove mounting screws (1, Fig. 5) at top and bottom of rear panel.

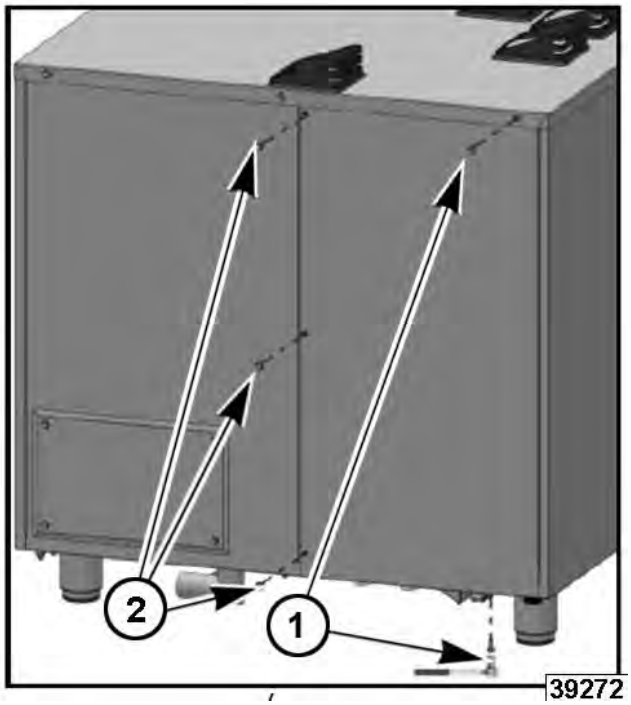


Fig. 5

2. Remove mounting screws (2, Fig. 5) on left side of rear panel.
3. Unhook panel from bottom and lower it to remove.

Fig. 6

4. Reverse procedure to install.

GREASE COLLECTION HATCH COVER (OPTIONAL)

1. Remove hatch cover mounting screws.

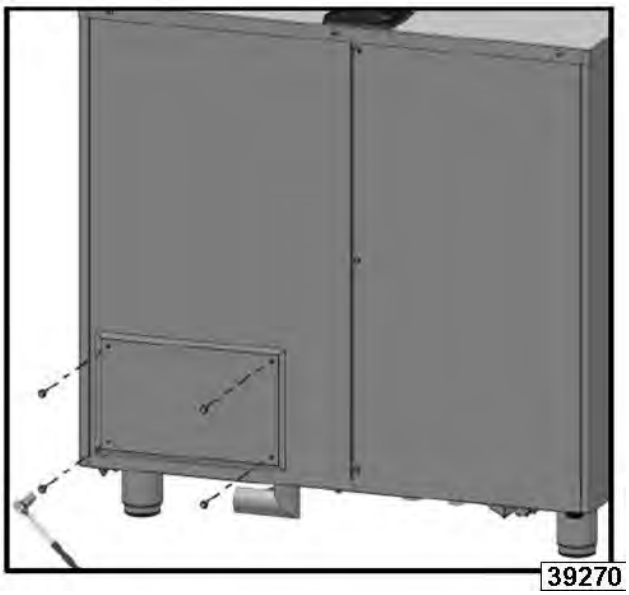


Fig. 7

2. Remove hatch cover.

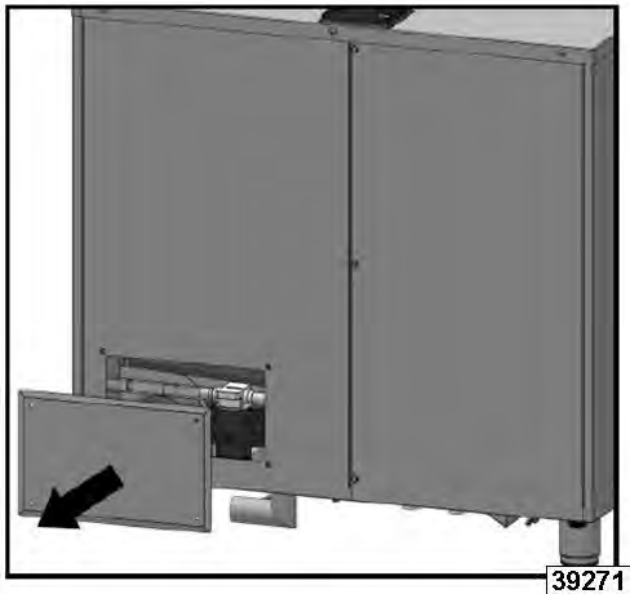


Fig. 8

3. Reverse procedure to install.

PLACE MAIN BOARD IN SERVICE POSITION

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: This is for placing the main board in service position to access components behind the board. To remove main board, refer to MAIN / HUMIDITY BOARDS.

1. Remove LEFT PANEL.
2. Loosen board bracket mounting screw (1, Fig. 9).

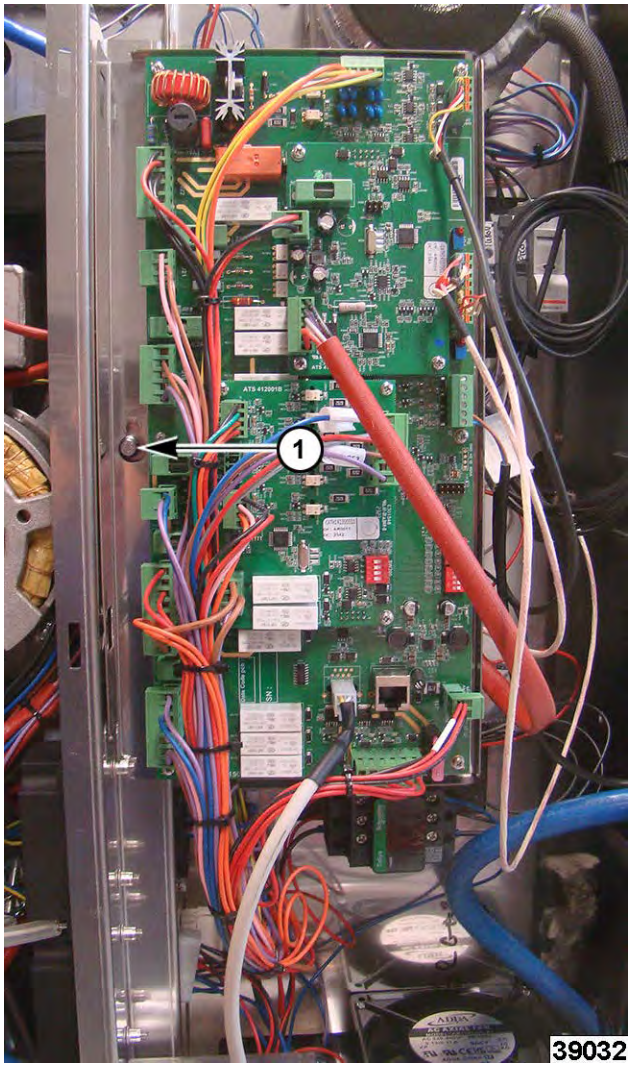


Fig. 9

3. Lift bracket up, pull and remove. (1, Fig. 10).

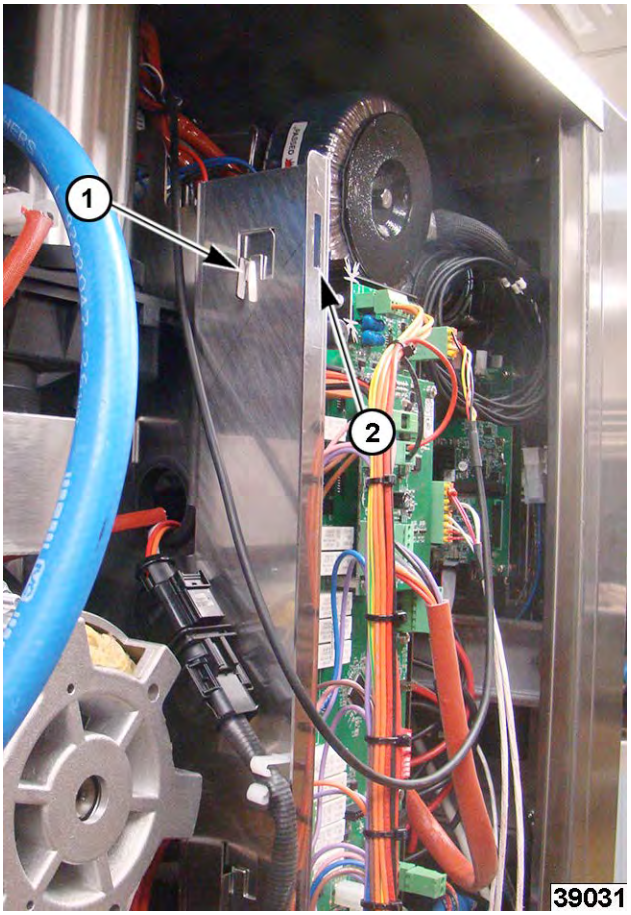


Fig. 10

4. Hang on outer hooks on front flange (2, Fig. 10) for service position.
5. Reverse procedure to mount bracket back in place.

MAIN / HUMIDITY BOARDS

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: Push-in style connectors are used for some wire harnesses. Removal requires needle nose pliers to compress the two ends (1, Fig. 11) together to release the wire.

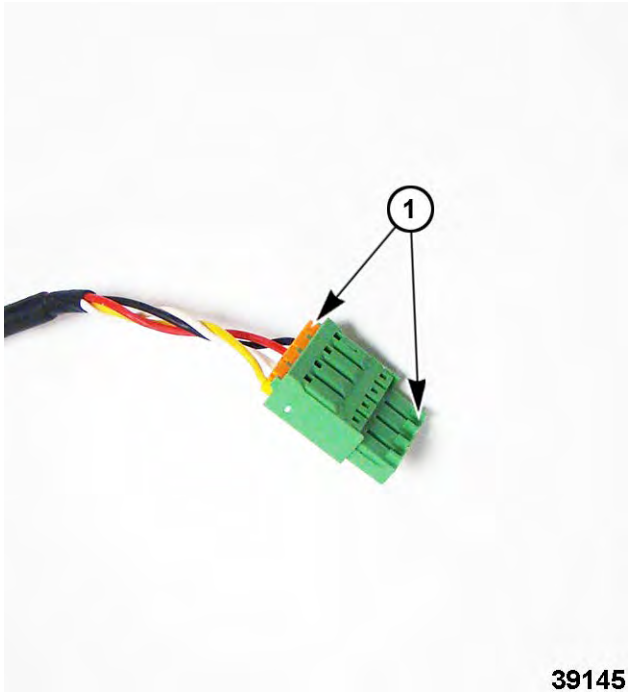


Fig. 11

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Note and disconnect all wiring connections.

NOTE: It is recommended to take photos of wire connectors on board.

4. Remove board (Qty 4) 8 mm mounting screws.

NOTICE

Carefully support board while removing mounting screws.

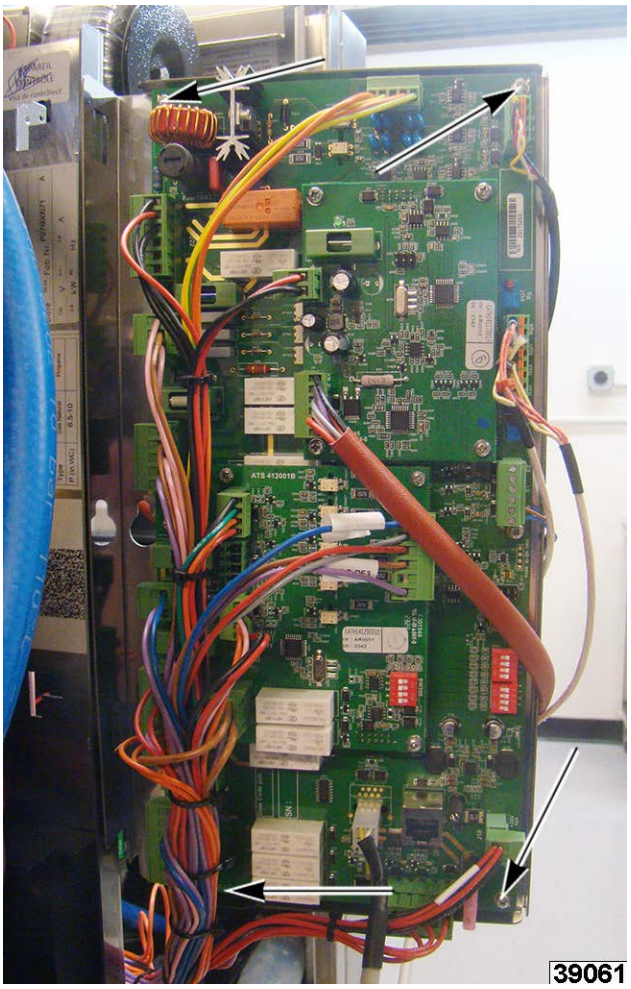


Fig. 12

5. Reverse procedure to install.
6. Carefully reinstall plugs so pins do not bend.
7. SET-UP SD CARD .
8. Verify proper operation.

CONTACTOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Note and disconnect wiring from contactor.

4. Remove contactor from din rail.

Removal

- Push in contactor on the right side and the left side will release from the din rail.

Install

- Connect right side of contactor onto din rail, then push left side onto the din rail.

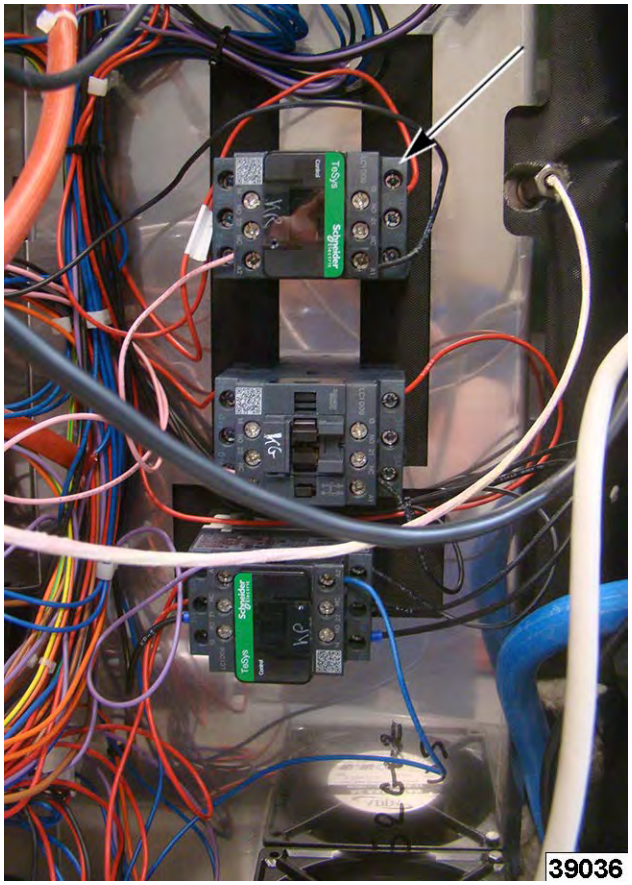


Fig. 13

5. Reverse procedure to install.
6. Verify proper operation.

CONTROL TRANSFORMER

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Remove mounting bolt.

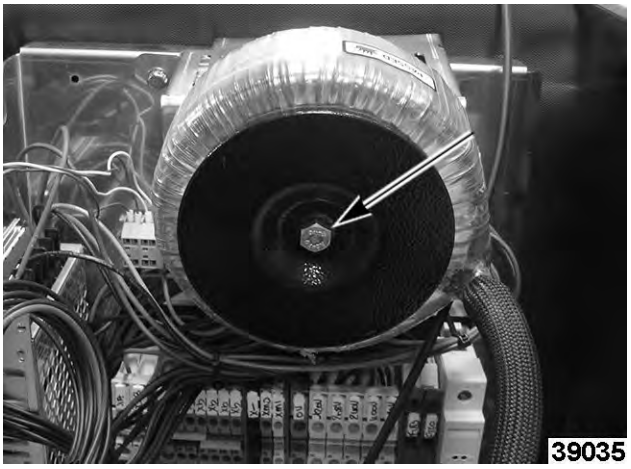


Fig. 14

4. Unplug wire connector.
5. Lift off bracket.
6. Reverse procedure to install.
7. Verify proper operation.

FUSES AND TERMINAL BLOCK

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Locate fuses (2, 3, Fig. 15) which are located on right side of terminal block (1, Fig. 15).

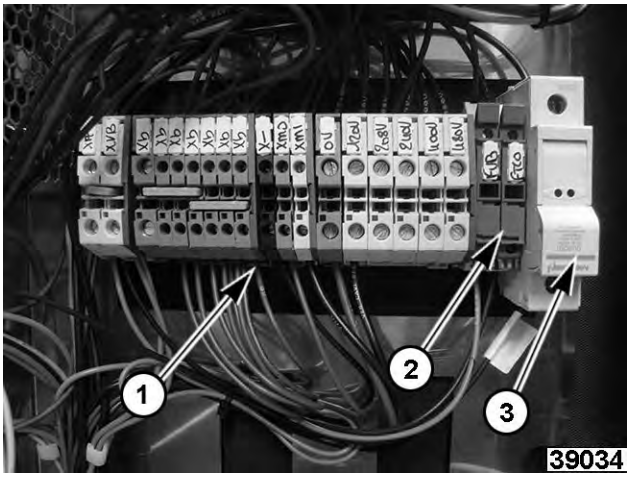


Fig. 15

- Pull down from top of fuse holder (2, Fig. 15) to access 4 amp fuse for control circuit.

- Lift up on bottom of fuse holder (3, Fig. 15) to access 10 amp fuse for motor.

4. Reverse procedure to install.
5. Verify proper operation.

BUZZER

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .

NOTICE

Take care when removing hardware, they could fall into an inaccessible area of the unit.

3. Remove buzzer mounting screws from back of control panel and remove buzzer.

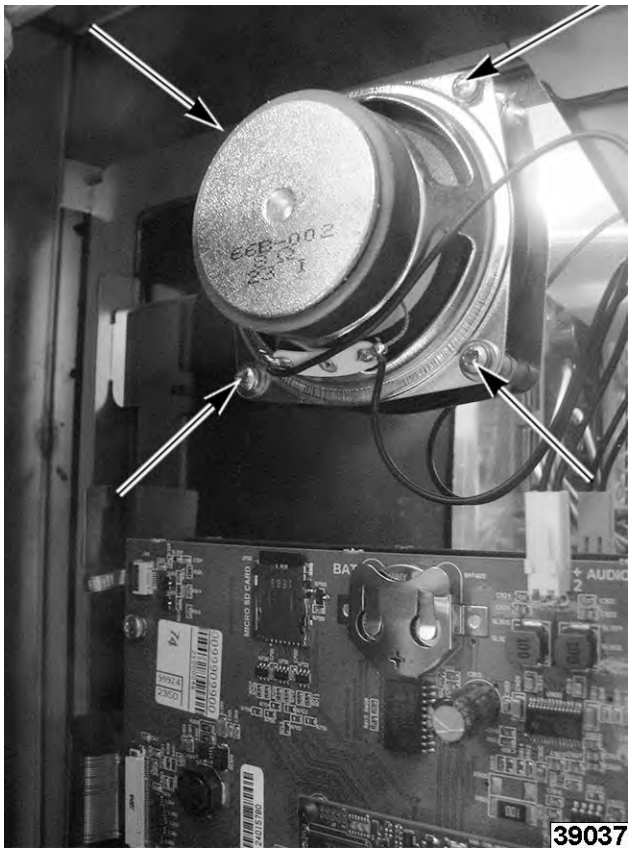


Fig. 16

4. Reverse procedure to install.

ENCODER

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Pull knob off of control panel.
4. Unscrew nut from encoder shaft.

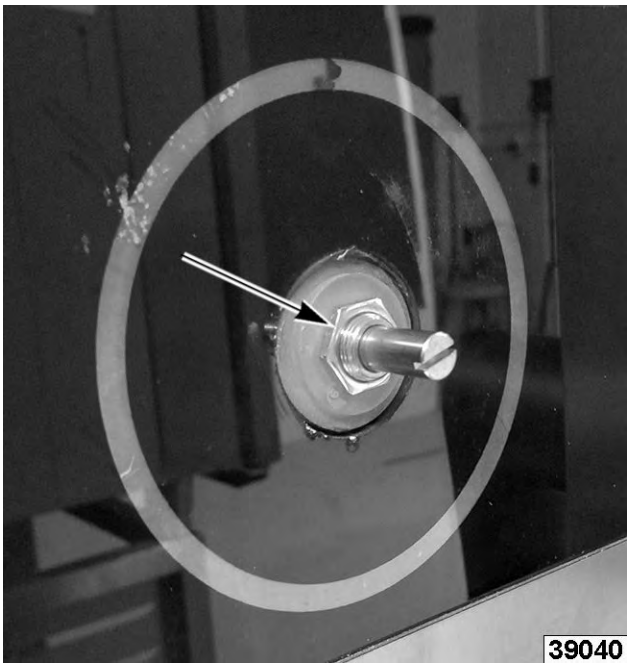


Fig. 17

5. From the backside of control panel disconnect encoder wiring (1, Fig. 18) from board.

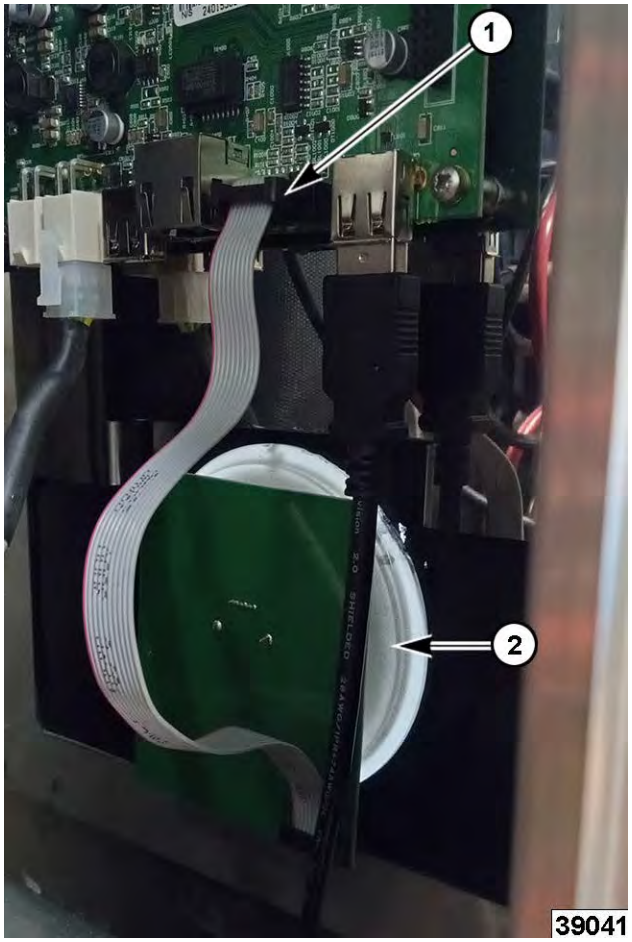


Fig. 18

6. Remove encoder.
7. Reverse procedure to install.
8. Verify proper operation.

DISPLAY BOARD

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTICE

When replacing board, transfer SD card to replacement display board. Failing to do this will result in loss of customer settings and recipes.

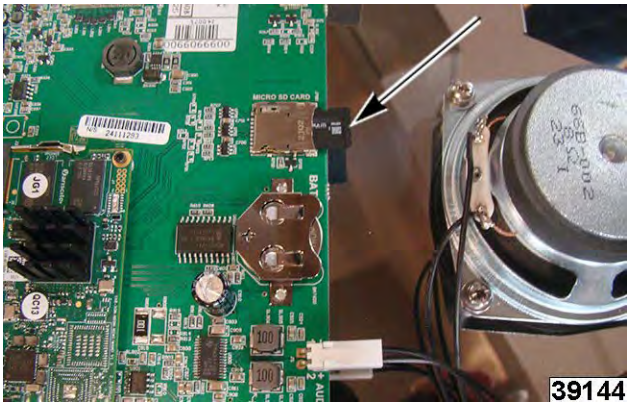


Fig. 19

NOTE: Display board comes as an assembly with the mounting bracket. Do not remove board from mounting bracket.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .

NOTICE

Take care when removing hardware, they could fall into an inaccessible area of the unit.

3. Remove mounting bracket hardware to remove display board assembly.

Fig. 20

4. Reverse procedure to install.
5. Verify proper operation.

DOOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Door may be hot. Allow to cool before servicing.

1. Remove TOP COVER PANEL.
2. Remove LEFT PANEL.
3. PLACE MAIN BOARD IN SERVICE POSITION .
4. Disconnect door wiring behind I/O board and across top of oven under top panel. Lay wires on right side of unit by door.

NOTE: Remove wire ties. Replace wire ties when reinstalling.

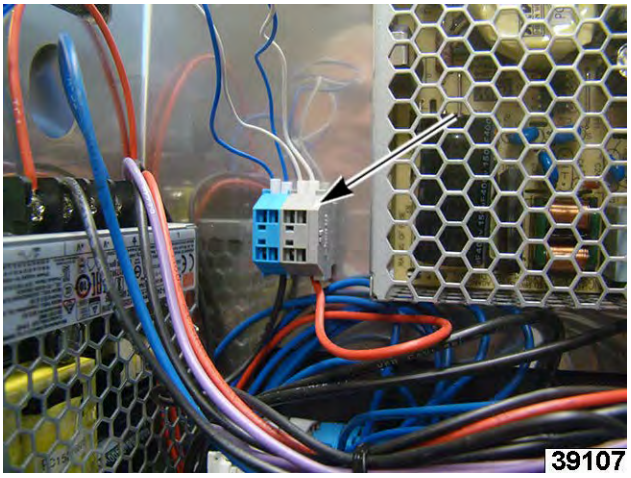


Fig. 21

5. Remove INNER DOOR.
6. Remove screws on top hinge.

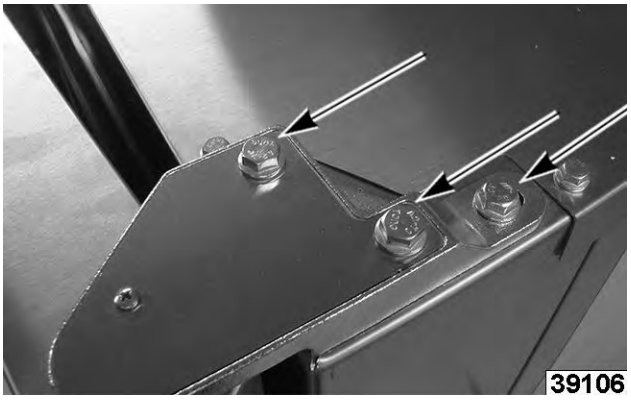


Fig. 22

7. Lift door off lower pin.

Fig. 23

8. Reverse procedure to install.
9. Verify proper operation.

INNER DOOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Door may be hot. Allow to cool before servicing.

1. Press on top and bottom thumb release clips.

Fig. 24

2. Carefully lift inner door off inside pins.

Fig. 25

3. Reverse procedure to install.
4. Verify proper operation.

DOOR HANDLE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Open door.

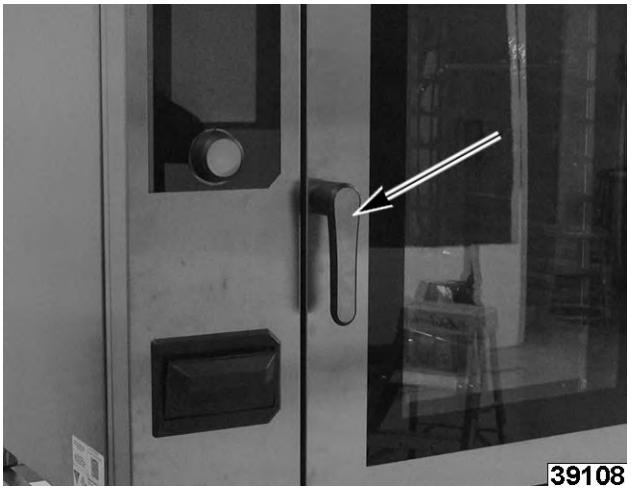


Fig. 26

2. Remove door handle mounting screws on inside of door.

NOTE: Support handle when removing mounting screws to prevent dropping.

Fig. 27

3. Reverse procedure to install.
4. Verify proper operation.

STEAM GENERATOR WATER LEVEL SENSOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Turn water supply off to unit.
2. Remove LEFT PANEL.
3. Note and disconnect probe wiring (1, Fig. 28).
4. Unscrew probe (2, Fig. 28) with 13 mm wrench.

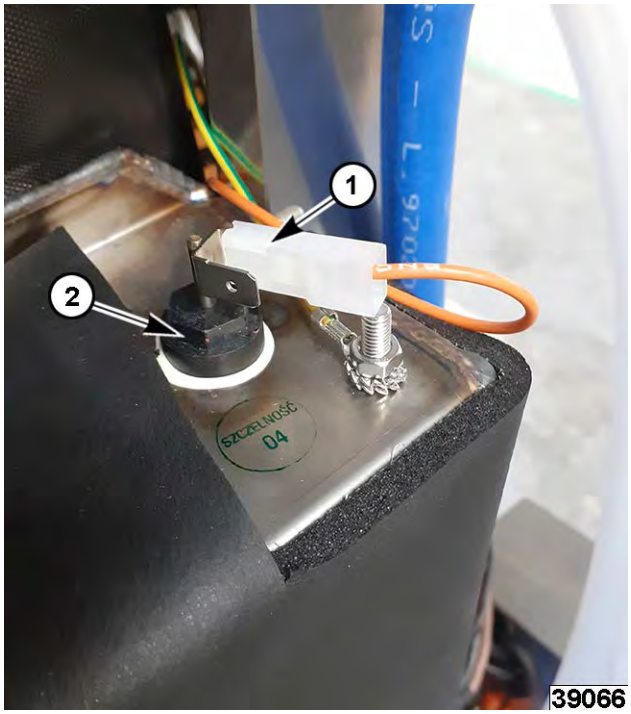


Fig. 28

5. Install with Loctite® 567 on threads.
6. Reverse procedure to install.

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

A. Turn on power supply to oven.

B. Turn on water supply to oven.

7. Verify proper operation.

CORE PROBE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Removal

1. Remove TOP COVER PANEL.
2. Remove RIGHT PANEL.
3. Tie end of string to end of probe wires on each side of connectors.

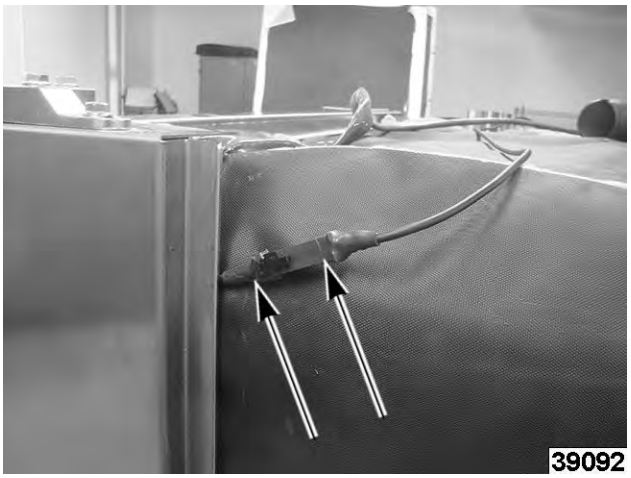


Fig. 29

NOTE: String should be long enough to route down through oven cavity.

4. Disconnect connectors.
5. Remove right side rack guide.

Fig. 30

6. Remove core probe mounting screws.

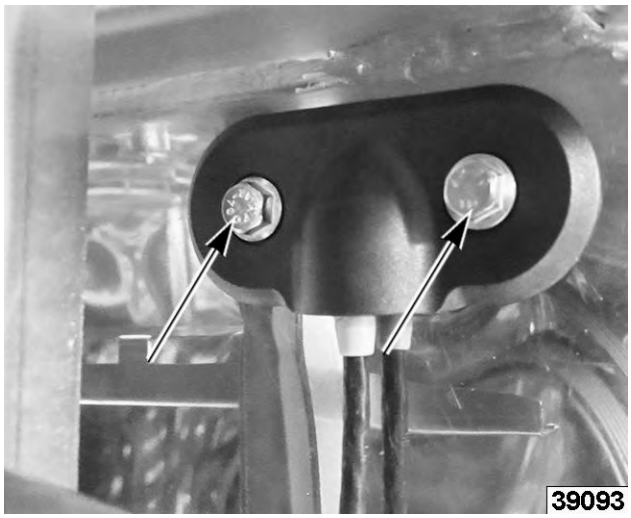


Fig. 31

7. Disconnect core probe wires inside of oven cavity.

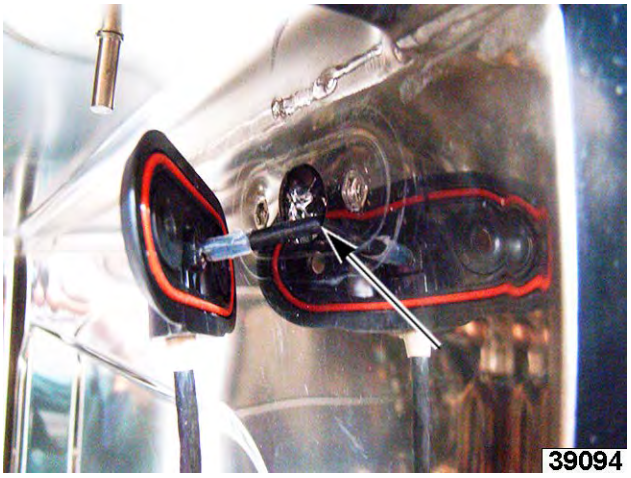


Fig. 32

8. Pull core probe wire with string connected, through to inside of oven cavity.
9. Untie string from old core probe wire and tie onto new core probe wire by connector.
10. Pull top connector end of string to route new core probe wire through cavity wall and on top of oven.
11. Connect wire connectors and remove string.
12. Replace top panel.
13. Install mounting screws inside oven cavity.
14. Verify proper operation.

STEAM GENERATOR TEMPERATURE PROBE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. **GAS UNITS ONLY:** Remove cavity GAS VALVE.
3. Remove nut on probe.

NOTE: Gas unit shown in Fig. 33.

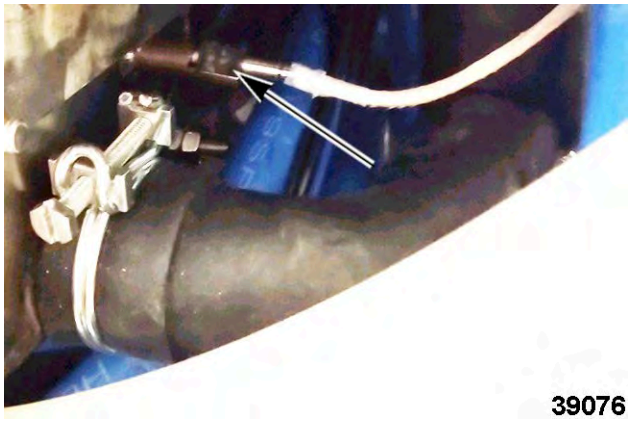


Fig. 33

NOTE: Electric unit shown in Fig. 34.

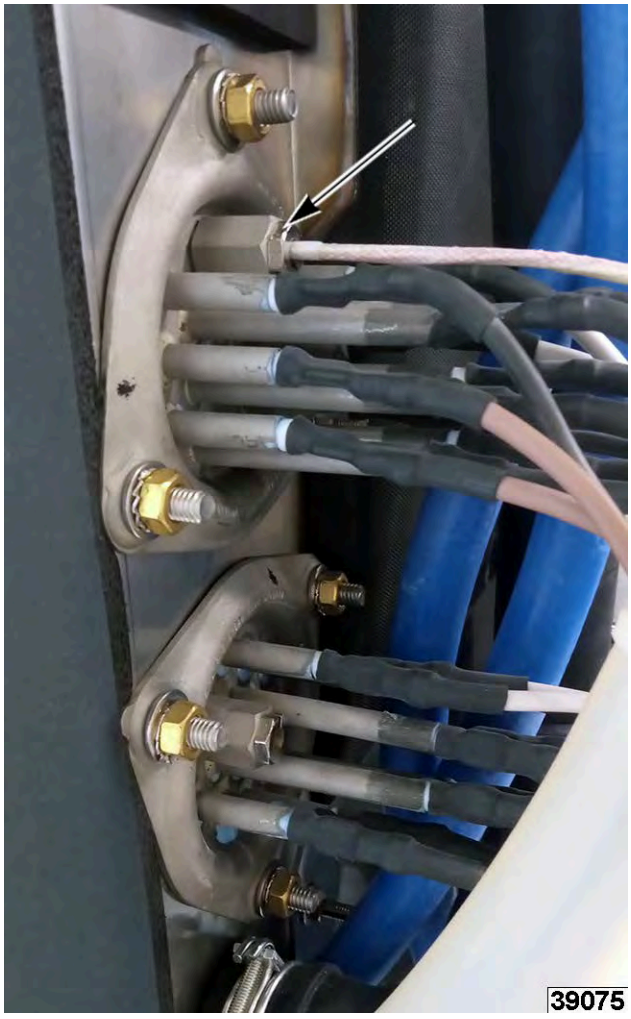


Fig. 34

4. Slide temperature probe out.
5. Reverse procedure to install.
6. Verify proper operation.

CAVITY TEMPERATURE PROBE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

Turn off incoming water supply.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Note and disconnect wiring.

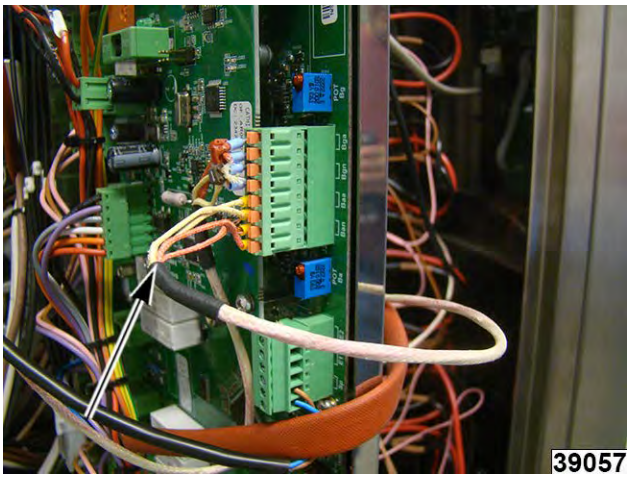


Fig. 35

4. Open door and remove clamp on probe inside cavity.
   A. Remove hoses.

NOTE: Electrical unit shown in Gas ovens will be in same location.

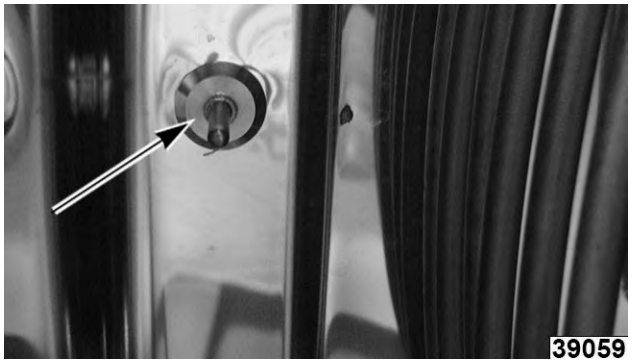


Fig. 36

5. Slide temperature probe outside through cavity wall.

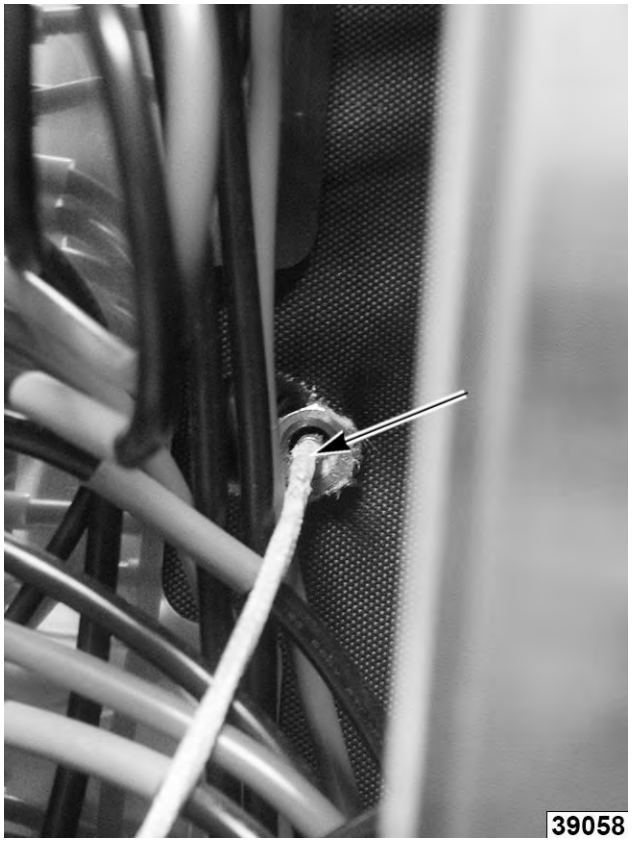


Fig. 37

6. Reverse procedure to install.
7. Verify proper operation.

LED CAVITY LIGHTS

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Open door and remove (6) mounting screws.

Fig. 38

2. Remove light mounting screws (1, Fig. 39).

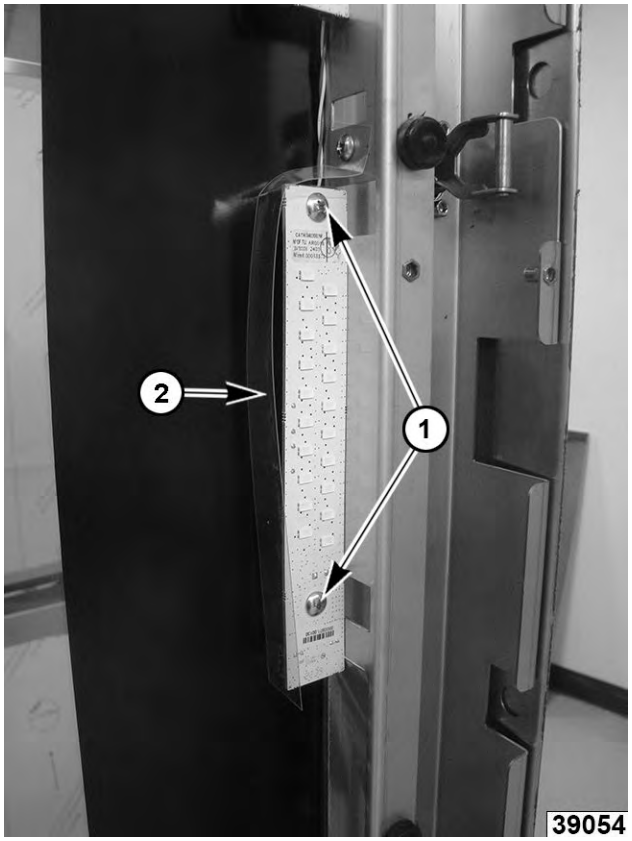


Fig. 39

3. Lift up and pull out panel.
4. Reverse procedure to install.

NOTE: Mylar (2, Fig. 39) should be tucked under door panel to protect LED lighting when installing.

CAVITY WATER LEVEL SENSOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove STEAM GENERATOR GAS VALVE.
3. Note and disconnect water level sensor wire connector located behind hoses.

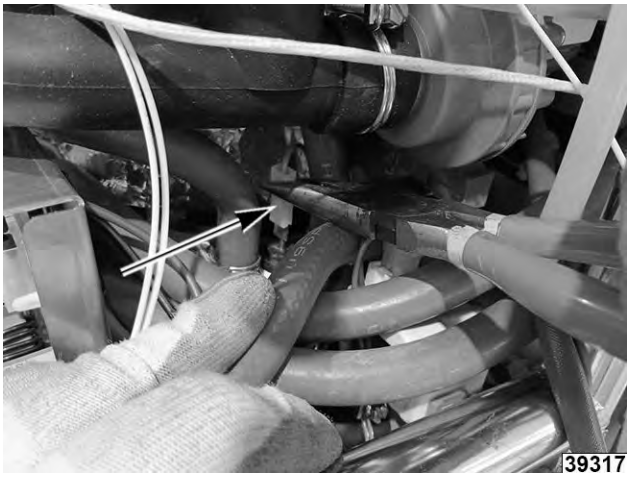


Fig. 40

4. Loosen hose clamps for 13 mm wrench access.

Fig. 41

5. Remove water level sensor (2, Fig. 42).

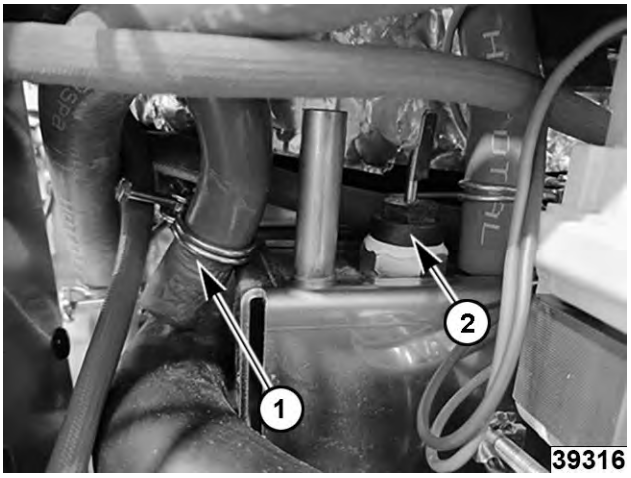


Fig. 42

6. Reverse procedure to install.
7. Verify proper operation.

DOOR SEAL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Open door.
2. Pinch door seal in each corner and pull out.

Fig. 43

NOTE: Add high temperature silicone to prevent leaking.

3. Remove seal from sides, top and bottom.
4. Install all four corners.
5. Install seal on sides, top and bottom.

DOOR REED SWITCH MAGNET

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Disconnect wire harness (J5, Brown and Blue) from board.

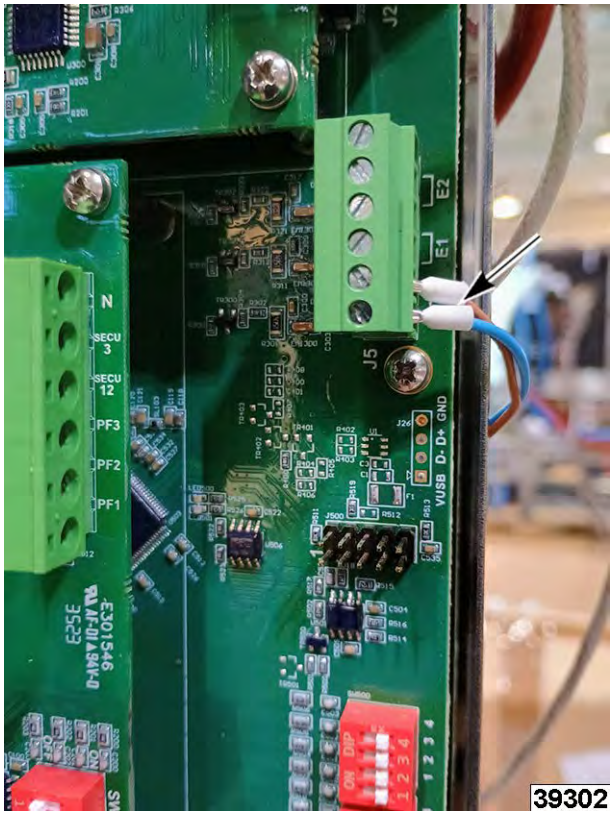


Fig. 44

4. Remove wire tie on reed switch (1, Fig. 45).

Fig. 45

5. Pull switch (2, Fig. 45) up to slide out harness (Fig. 46).

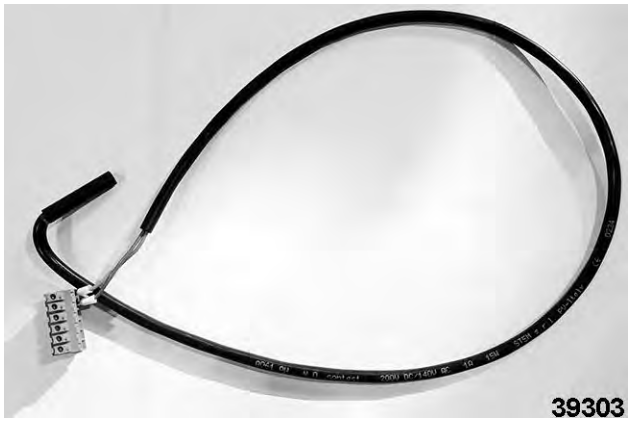


Fig. 46

6. Reverse procedure to install.
7. Verify proper operation.

POWER SUPPLIES

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove CONTROL TRANSFORMER.
2. Note and disconnect wiring to power supply which is being removed.

   • Switch Power Supply for Cavity Door Light, Solenoids, and optional Grease Gun (Ta on diagram) (1, Fig. 47).

   • Switch Power Supply for I/O Board 24 DC (Tc on diagram) (2, Fig. 47).

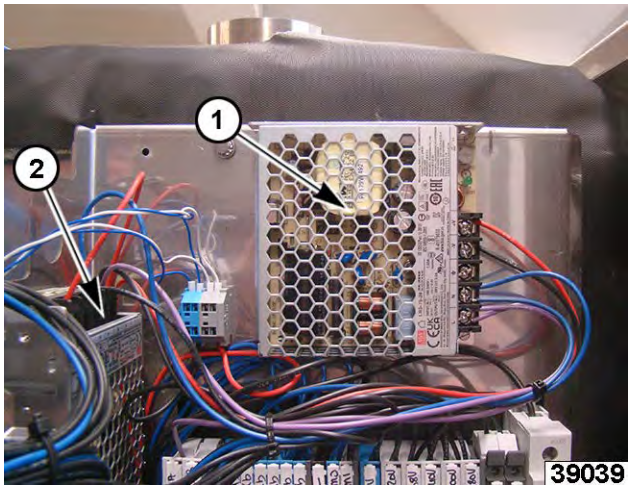


Fig. 47

3. Remove mounting screws to the switch power supply which is being removed.
4. Reverse procedure to install.
5. Verify proper operation.

STEAM GENERATOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove REAR PANEL.
3. GAS MODELS ONLY - Disconnect GAS - BURNER (STEAM GENERATOR - LOWER).
4. Note and disconnect water level sensor (2, Fig. 48) wire connector (1, Fig. 48).

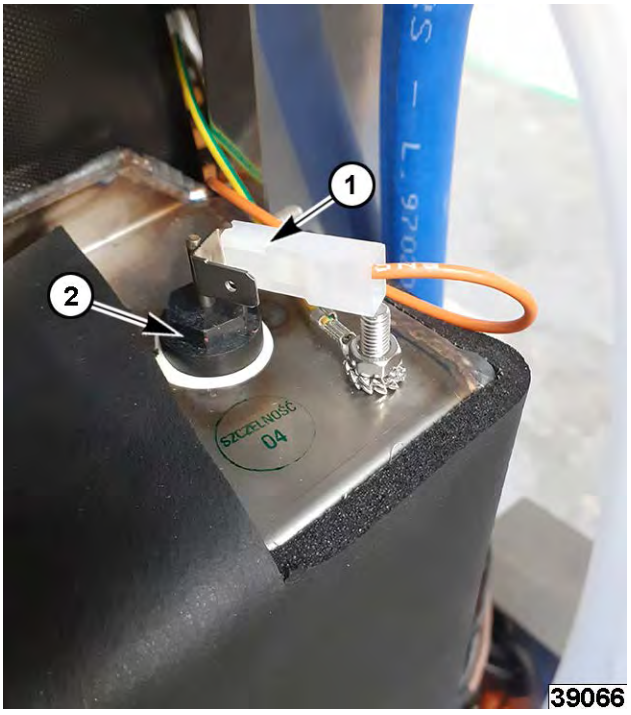


Fig. 48

NOTE: Bucket and rags may be necessary under drain hose to completely drain steam generator.

5.

Remove drain hose (1, Fig. 49) and completely drain steam generator.

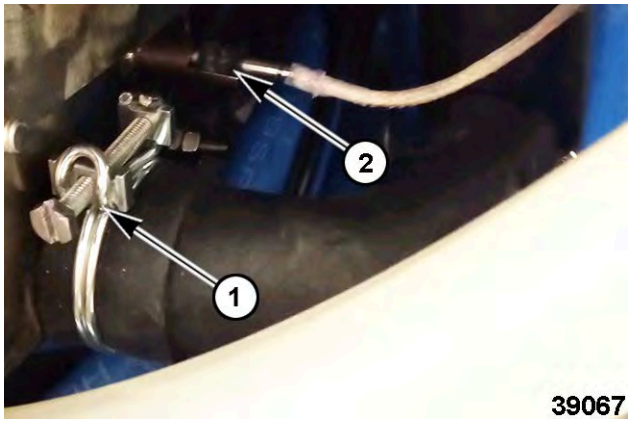


Fig. 49

6. Disconnect temperature probe (2, Fig. 49).
7. Remove arm bracket mounting bolt under left panel side.

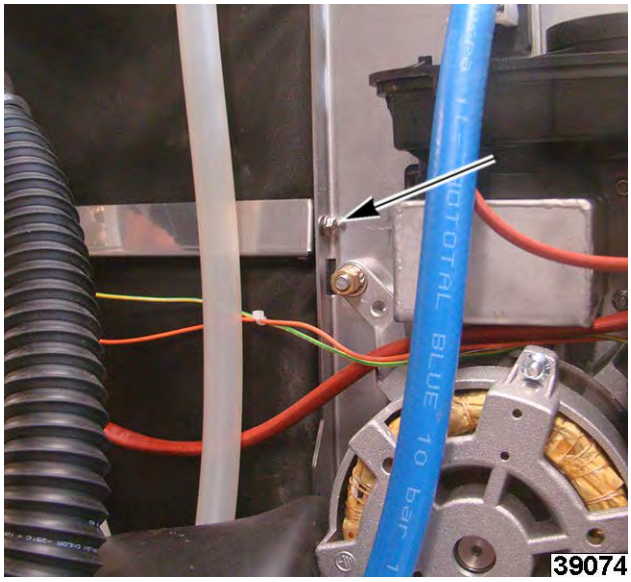


Fig. 50

8. Remove left panel side mounting bolts.

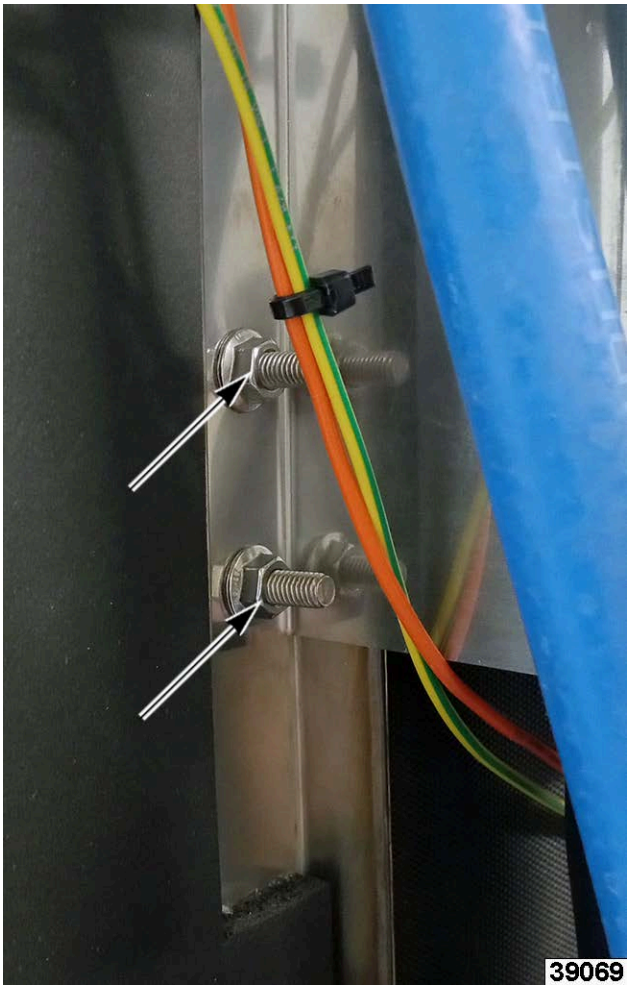


Fig. 51

9. Remove mounting bolts on oven rear side.

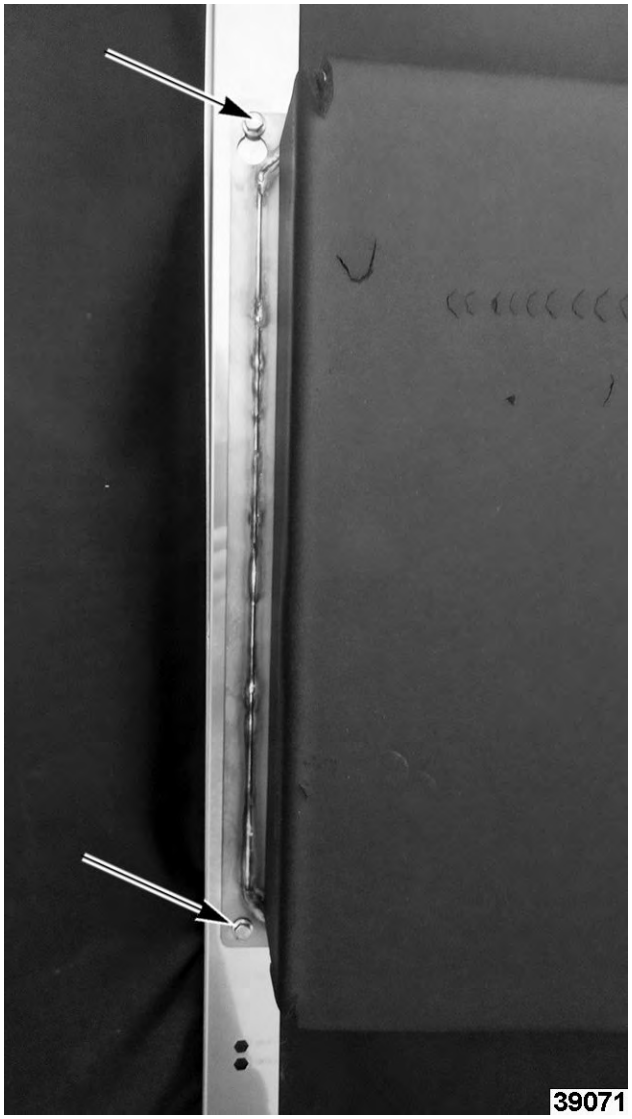


Fig. 52

10. Carefully pull steam generator out.

NOTE: Pull down to clear exhaust from top panel.

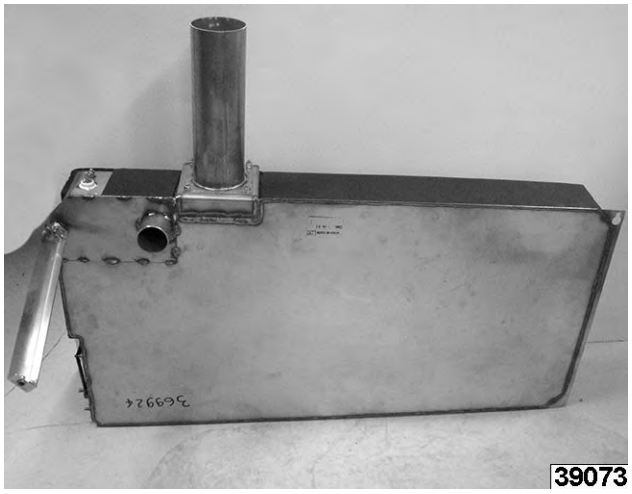


Fig. 53

NOTE: If replacing steam generator, replace steam tube outlet O-ring.

Fig. 54

11. Reverse procedure to install.
12. Verify proper operation.

STEAM GENERATOR PUMP

⚠WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: Pictures shown in procedure are from an Electrical Oven. Gas oven has same location, mounted behind gas valves as shown in Fig. 55.

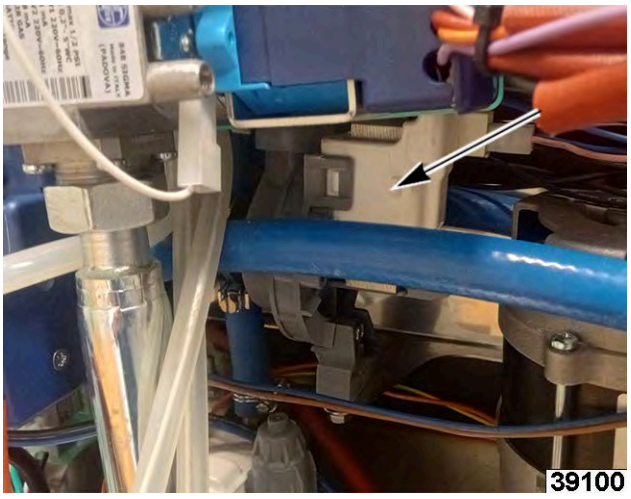


Fig. 55

1. Remove LEFT PANEL.

2. Note and disconnect wiring connectors (1, Fig. 56).

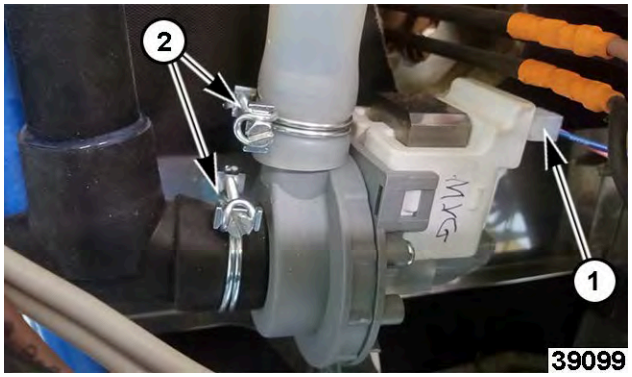


Fig. 56

3. Note and disconnect hoses (2, Fig. 56).
4. Remove mounting bracket bolts.

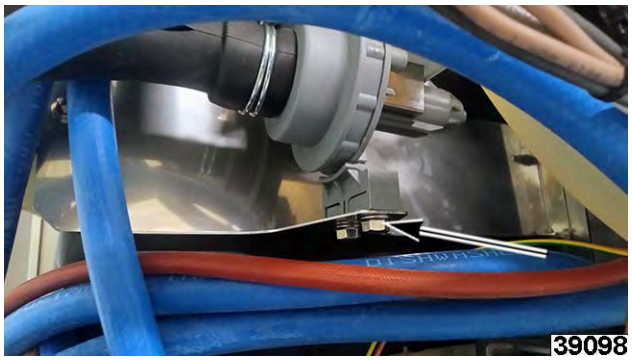


Fig. 57

5. Reverse procedure to install.
6. Verify proper operation.

DESCALE PUMP

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Note and disconnect wiring (1, Fig. 58).

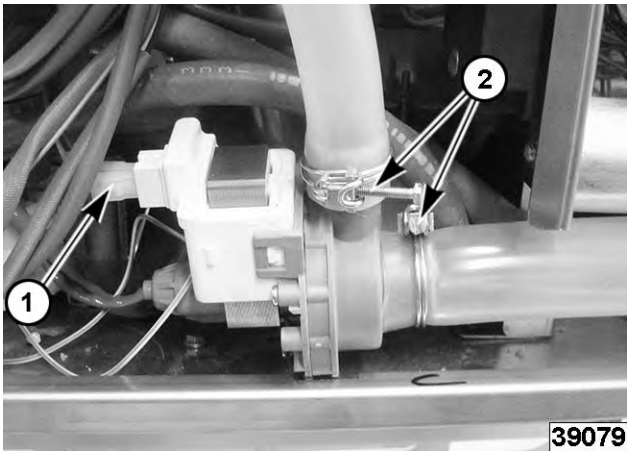


Fig. 58

3. Disconnect tubing (2, Fig. 58).
4. Loosen screw on mounting bracket to remove.

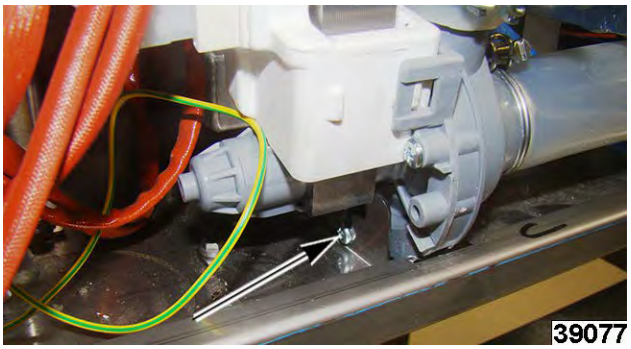


Fig. 59

5. Reverse procedure to install.
6. Verify proper operation.

WASH PUMP

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: Have container ready for possible excess water.

1. Remove LEFT PANEL.
2. Disconnect drain hose underneath base panel.

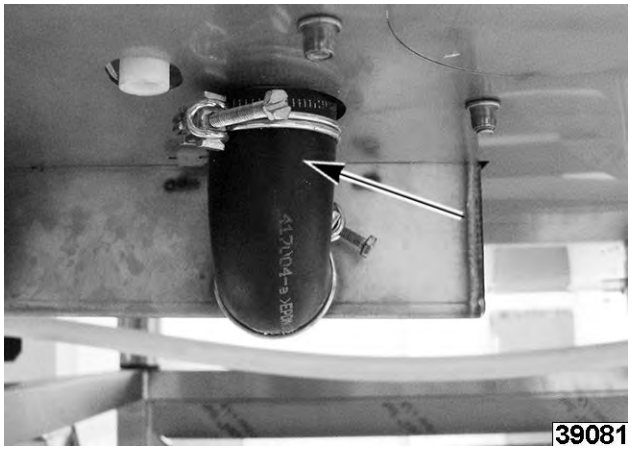


Fig. 60

3. Disconnect intake hose from wash pump (Fig. 61).

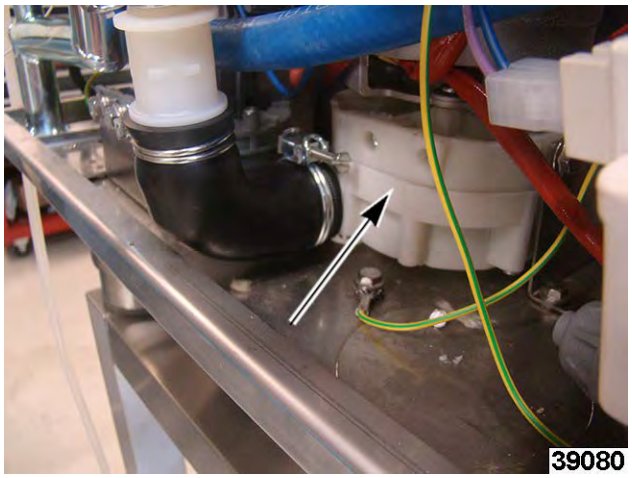


Fig. 61

4. Note and disconnect wires.
5. Remove wash pump.
6. Reverse procedure to install.
7. Verify proper operation.

SUMP PUMP (DRAIN)

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTICE

Verify Sump is drained before disconnecting supply power and removing panels.

1. Remove LEFT PANEL.
2. Disconnect drain hose underneath oven.

Fig. 62

3. Note and disconnect wire connectors (1, Fig. 63) to drain pump.

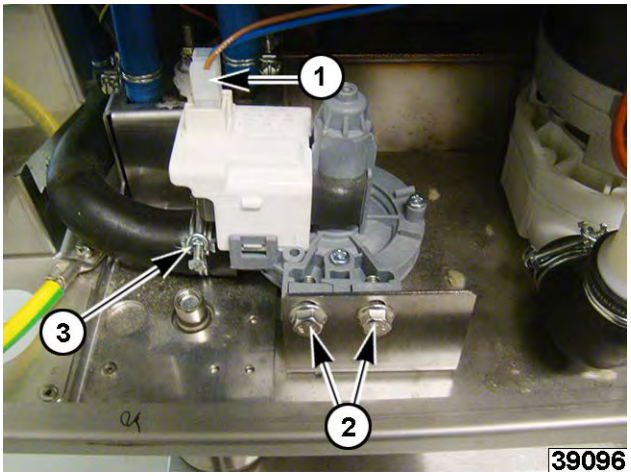


Fig. 63

4. Remove mounting bolts (2, Fig. 63).
5. Remove drain hose (3, Fig. 63).
6. Reverse procedure to install.
7. Verify proper operation.

VENT MOTOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove TOP COVER PANEL.

NOTE: Vent pipe will pull up off vent motor when top panel is removed.

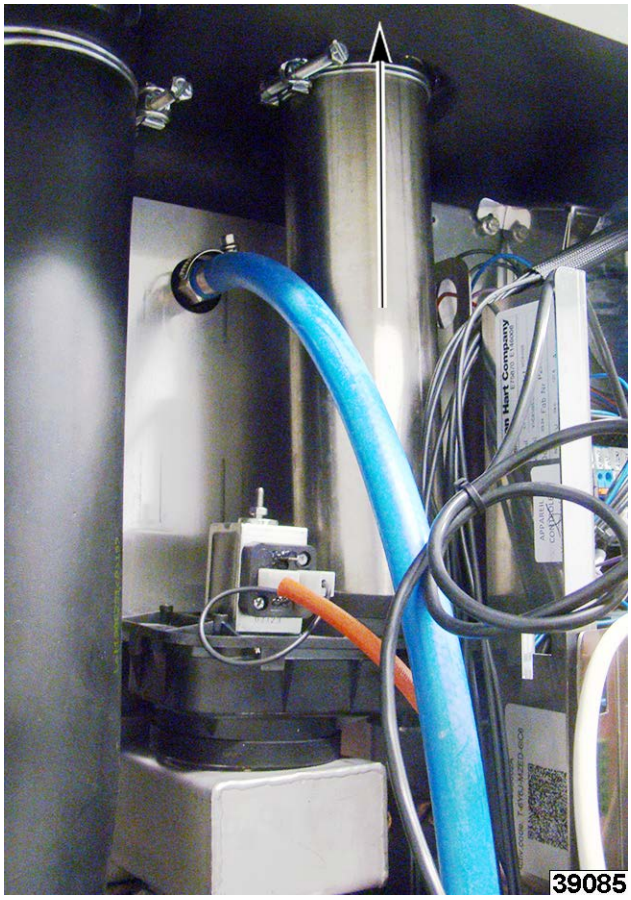


Fig. 64

2. Note and disconnect wires (1, Fig. 65).

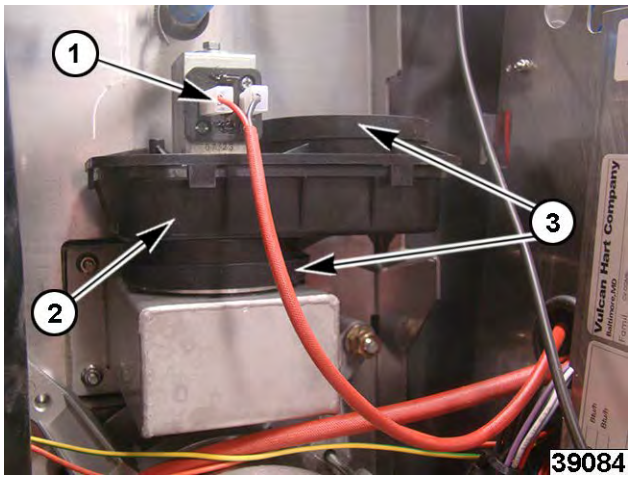


Fig. 65

3. Lift off motor (2, Fig. 65).
4. Reverse procedure to install.

NOTICE

When installing a new vent motor, replace both seals (3, Fig. 65).

5. Verify proper operation.

CONVECTION FAN

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTICE

Convection fan will change directions every four minutes. This is typical in combi and convection ovens.

Convection Fan

1. Remove oven racks.
2. Remove rack guides by lift up from bottom and down from top.

Fig. 66

3. Remove air baffle by lifting up off bottom pins.

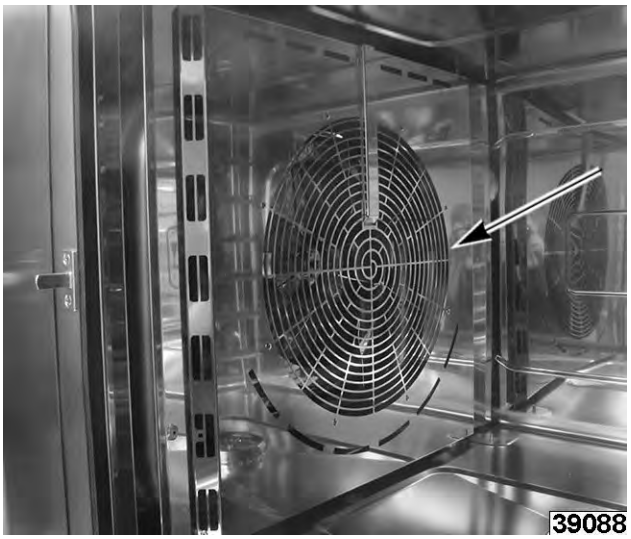


Fig. 67

4. Install proto puller tool on fan hub and tighten.

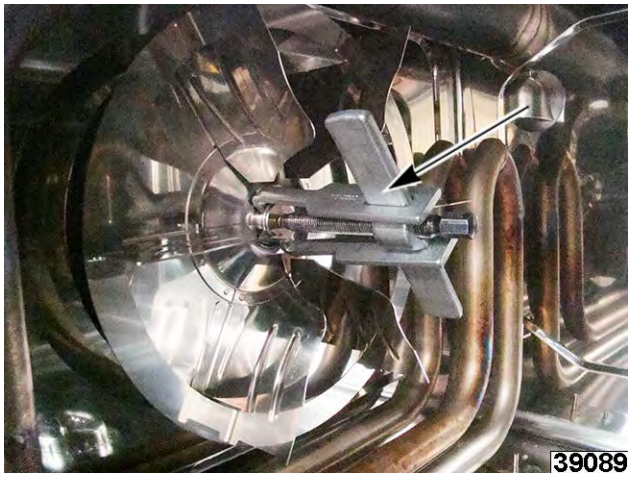


Fig. 68

⚠ WARNING

Proto puller may pop off when heating hub.

5. Apply heat to hub.

Fig. 69

6. Remove bolt.

Fig. 70

7. Remove fan.

NOTE: Refer to CONVECTION FAN MOTOR, if fan motor needs to be removed.

8. Reverse procedure to install.

9. Verify proper operation.

CONVECTION FAN MOTOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Removal

1. Remove CONVECTION FAN.
2. Remove LEFT PANEL.
3. Remove motor mounting nuts and washers.

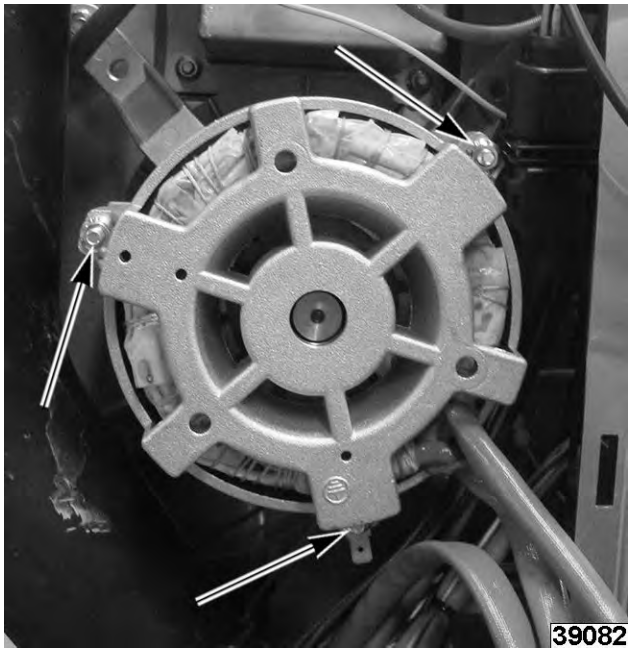


Fig. 71

4. Slide motor out.

NOTICE

Motor seal assembly will come out inside oven cavity. Refer to MOTOR SHAFT SEAL.

Installation

1. Insert MOTOR SHAFT SEAL in shaft bore through inside of oven cavity.

Fig. 72

2. Carefully slide motor shaft from outside through motor seal.
3. Install convection fan, washer and nut.
4. Install air baffle.

Fig. 73

5. Install rack guides.

Fig. 74

6. Install racks.
7. Verify proper operation.

MOTOR SHAFT SEAL

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove CONVECTION FAN.
2. Remove shaft seal and wear ring.

Fig. 75

NOTICE

Wear ring (1, Fig. 76) should also be replaced when changing shaft seal (2, Fig. 76).

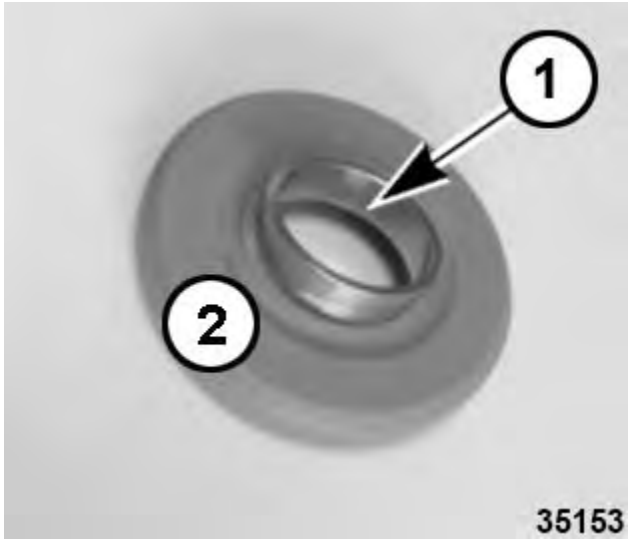


Fig. 76

3. Lubricate motor shaft with high temperature food quality grease.
4. Rotate assembly on motor shaft before fitting onto fan.

NOTICE

Motor shaft seal and wear ring should not rotate with shaft.

5. Reinstall CONVECTION FAN.
6. Verify proper operation.

CONVECTION FAN TRANSFORMER

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove REAR PANEL.
2. Disconnect wire connector (1,Fig. 77).

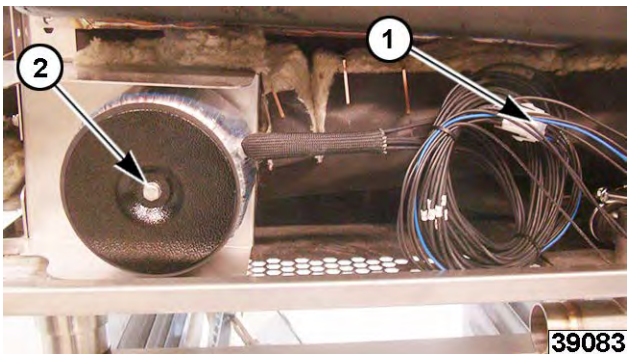


Fig. 77

3. Remove mounting screws (2, Fig. 77).
4. Reverse procedure to install.
5. Verify proper operation.

OXYGEN SENSOR

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Locate oxygen sensor behind main board.

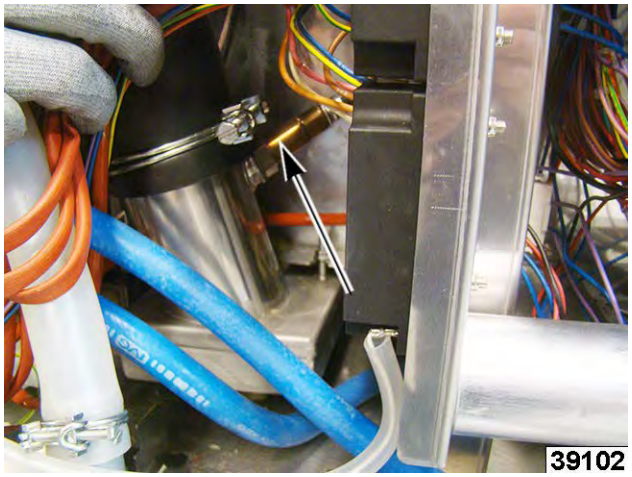


Fig. 78

4. Remove cavity drain exhaust pipe using 7/8" or 22 mm wrench.

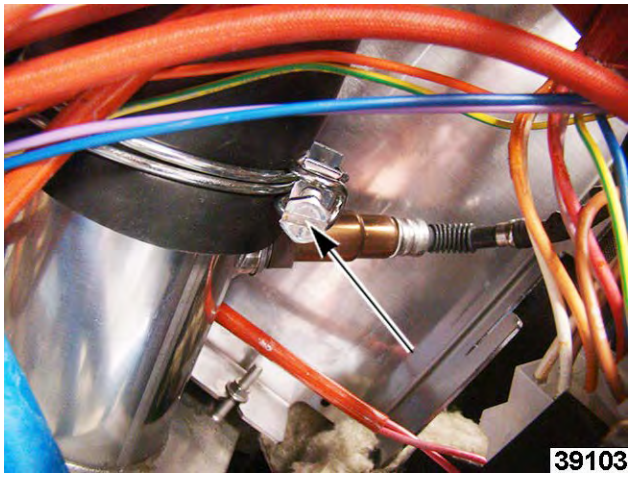


Fig. 79

5. Cut zip tie off oxygen sensor wiring.

NOTE: Do not replace zip tie on wiring when replacing.

6. Note and disconnect wiring connector.

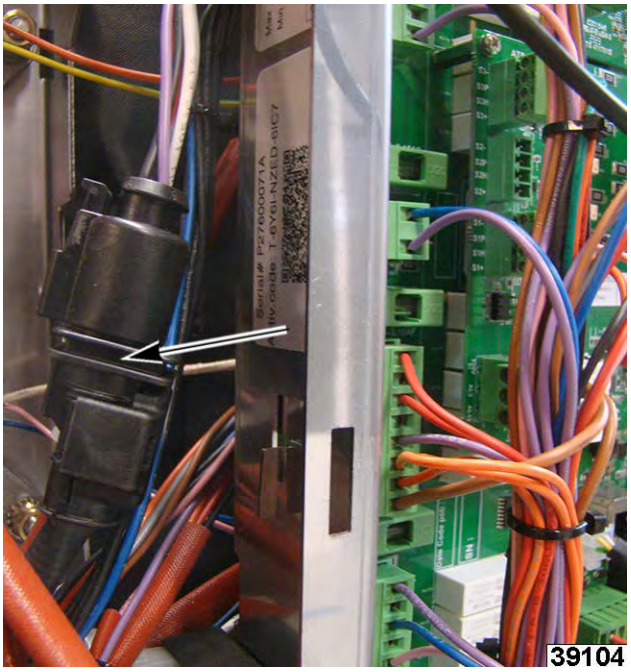


Fig. 80

7. Unscrew oxygen sensor from exhaust pipe.

NOTE: Utilize wrench flats to remove oxygen sensor.

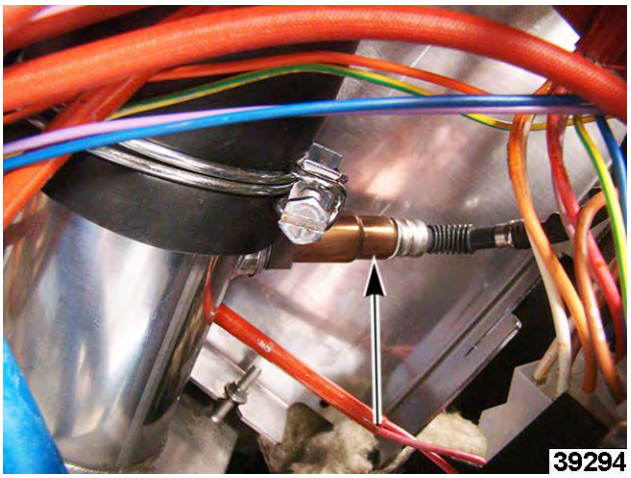


Fig. 81

8. Reverse procedure to install.

NOTICE

Verify cable installation:

- Cable is as straight as possible. Not twisted and no loops.
- Connector clicks to ensure a good connection.
- Cable has passed through cable saddle provided.
- Cable is routed through the highest grommet on the board to avoid twisting.

- Wiring is not near sensor. Install sensor close to exhaust as possible.

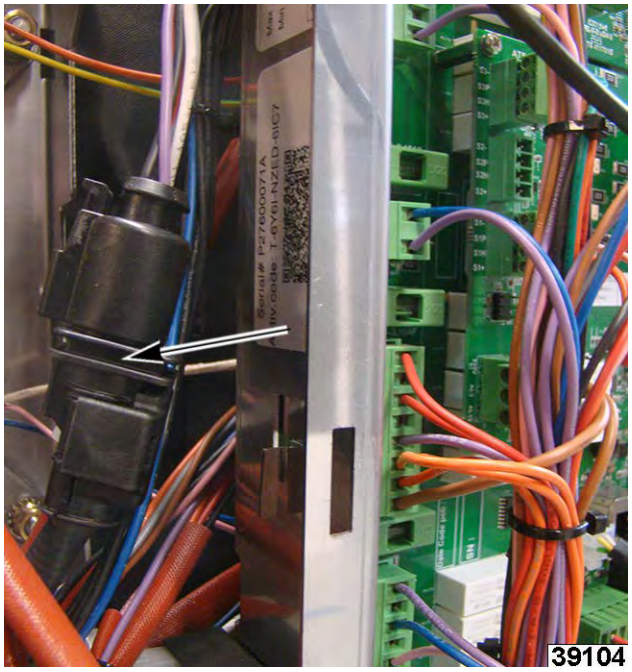


Fig. 82

NOTICE

Oxygen sensor must be in vertical position when installing for proper operation.

9. Verify proper operation.

STEAM AND WASH SOLENOID ASSEMBLY

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Turn off water supply to solenoids.
2. Remove REAR PANEL.
3. Note and disconnect wires.

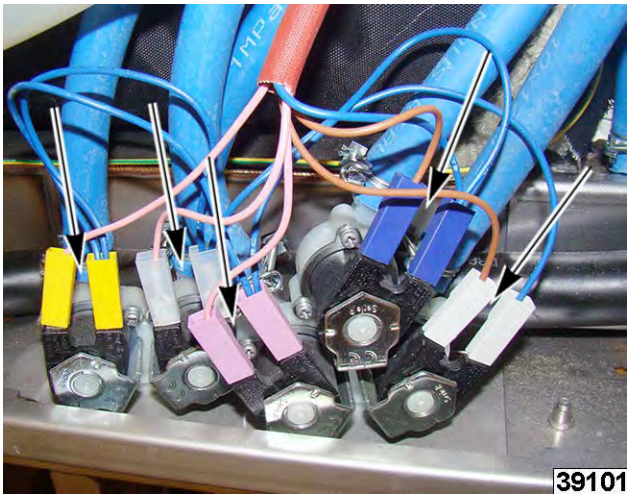


Fig. 83

4. Remove mounting screws from underneath unit.

Fig. 84

5. Note and disconnect hoses.
6. Reverse procedure to install.
7. Verify proper operation.

SPRAYER

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Turn water supply off to unit.
2. Unscrew sprayer nozzle.

Fig. 85

3. Loosen two front screws.

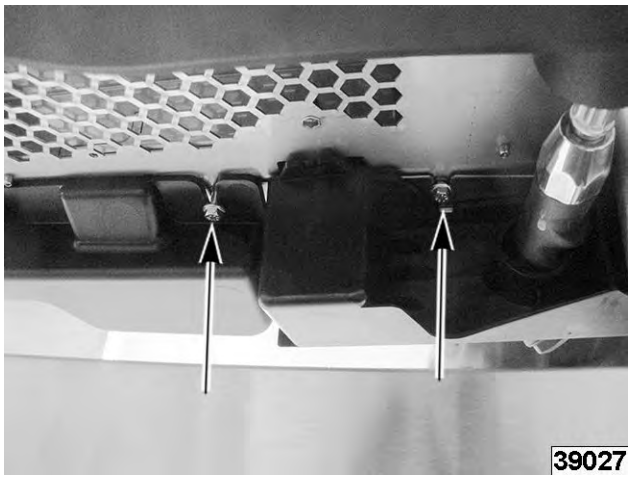


Fig. 86

4. Remove one mounting screw.

NOTE: Do not remove these two screws or hose will unwind. These screws are for hose spring tension.

5. Reverse procedure to install.
6. Verify proper operation.

ELECTRIC - CAVITY ELEMENTS

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: There are two sets of cavity elements, inner (1, Fig. 87) and outer (2, Fig. 87). Each set has its own wiring.

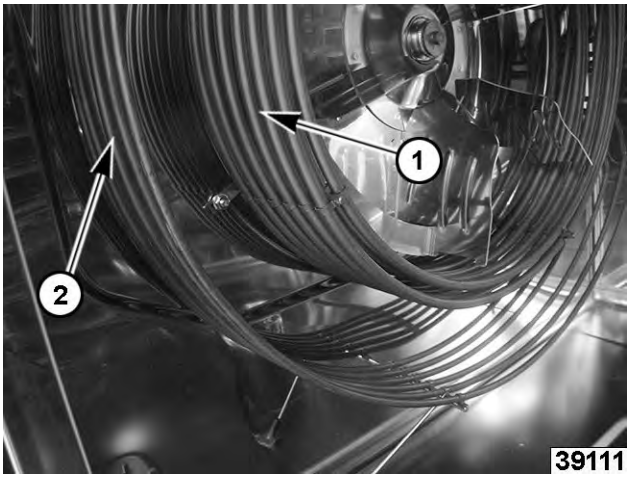


Fig. 87

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Note and disconnect element wires from contactors.

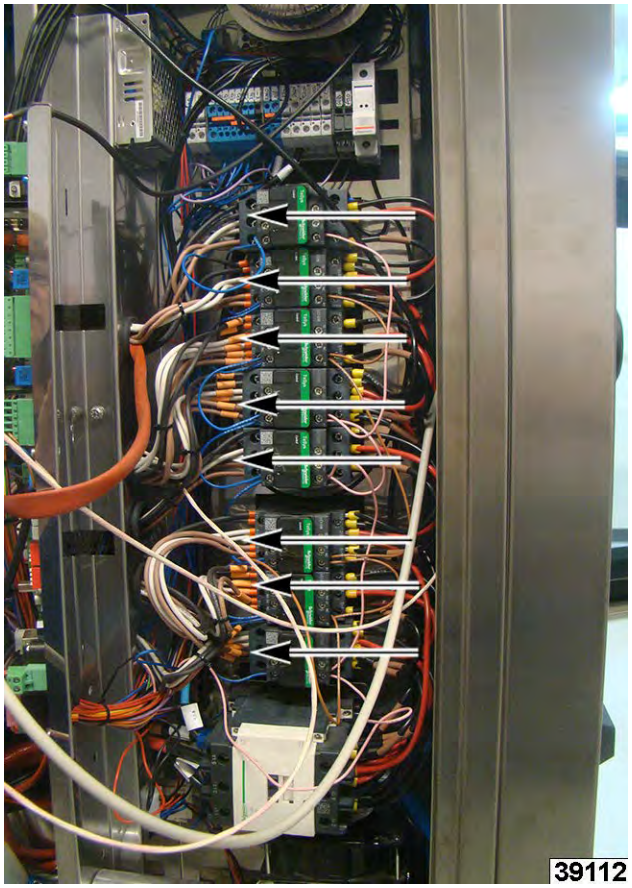


Fig. 88

4. Remove element mounting nuts outside oven cavity.

   Cavity Elements shown in Fig. 89 .

Fig. 89

5. Remove element mounting nut inside oven cavity.
6. Pull element wires through cavity wall from inside oven cavity.
7. Reverse procedure to install.

NOTE: If installing new elements, install a new gasket inside (Fig. 90) and outside (Fig. 91) cavity wall.

Cavity Elements Shown in Fig. 90

Fig. 90

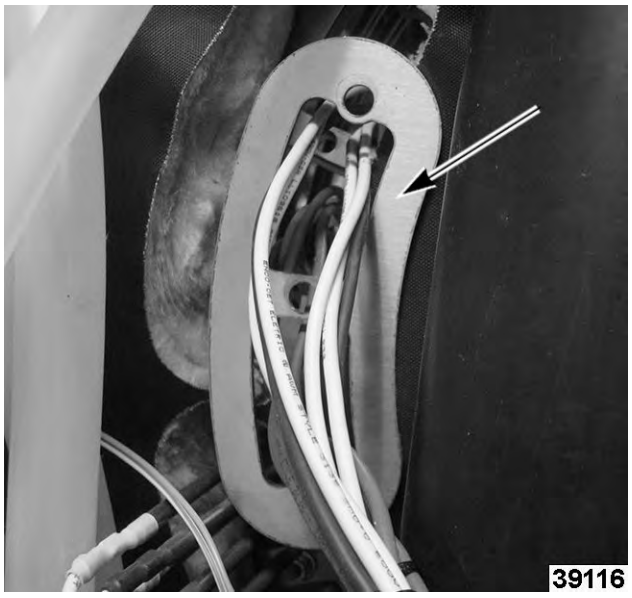


Fig. 91

8. Verify proper operation.

ELECTRIC - STEAM GENERATOR ELEMENTS

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

NOTE: There are two sets of cavity elements, inner and outer. Each set has its own wiring.

1. Remove LEFT PANEL.
2. PLACE MAIN BOARD IN SERVICE POSITION .
3. Note and disconnect element wires from contactors.
4. Remove element mounting nuts outside oven cavity.

NOTE: 62/102 Models (Fig. 92) will have two sets of elements, 61/101 models have one set.

Fig. 92

5. Pull elements out of steam generator.
6. Reverse procedure to install.

NOTE: If installing new elements, install a new gasket inside cavity wall.

7. Verify proper operation.

GAS - SPARK BOXES

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove spark box mounting screws from spark box being removed.

Fig. 93

3. Disconnect spark wire.
4. Note and disconnect wiring.
5. Reverse procedure to install.
6. Verify proper operation.

GAS - BURNER (STEAM GENERATOR - LOWER)

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove REAR PANEL.
3. Note and disconnect blower wiring connections.

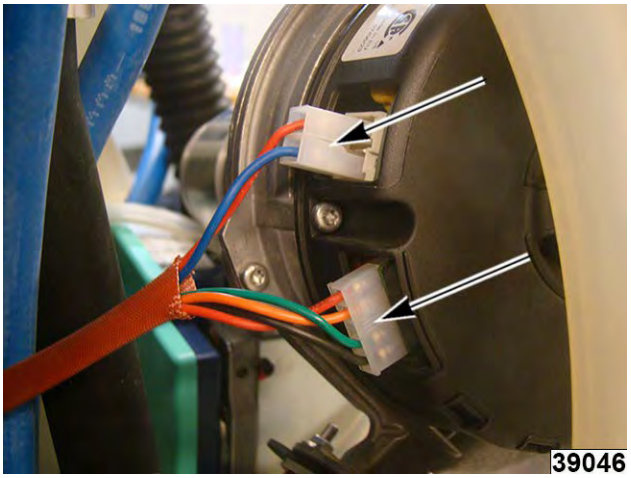


Fig. 94

NOTE: When disconnecting gas pipes, there will be a gasket. Take care not to lose gasket or it may fall into an inaccessible area of the unit.

Fig. 95

4. Note and disconnect burner gas piping connections.

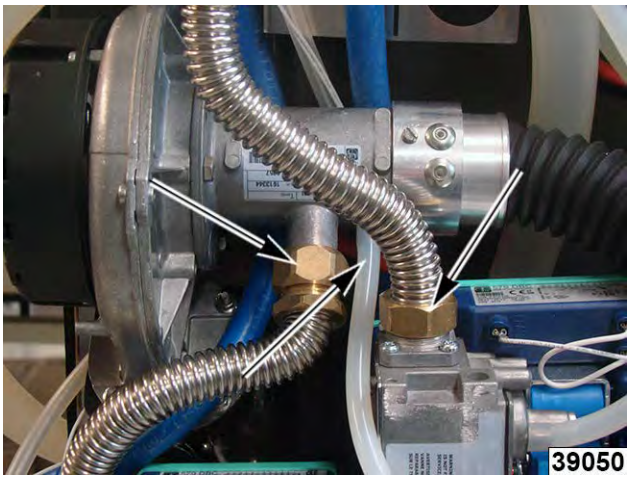


Fig. 96

5. Remove (4) 8mm mounting nuts.

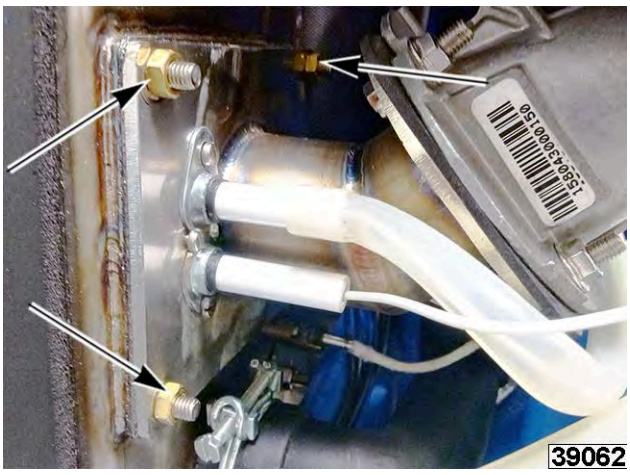


Fig. 97

6. Slide burner out of unit.
7. Remove burner from blower.

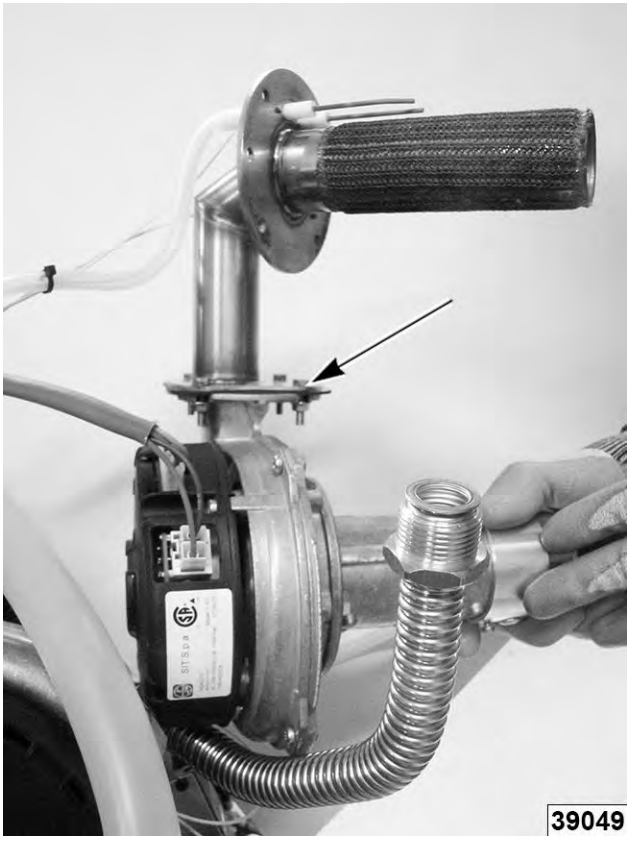


Fig. 98

NOTE: If installing a new burner, remove ignitor and flame sense and reinstall into new burner.

8. Reverse procedure to install.

NOTICE

Carefully watch ignitor and flame sense rods when reinstalling not to hit / bump side walls of heat exchanger.

NOTICE

Verify ignitor and flame sense gap. Refer to: GAS - ELECTRODES (GAS BURNER IGNITOR AND FLAME SENSE).

9. Verify proper operation.

GAS - BURNER (CAVITY / UPPER)

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Note and disconnect burner wiring connections.

Fig. 99

NOTE: When disconnecting gas pipes, there will be a gasket (2, Fig. 101). Take care not to lose gasket or it may fall into an inaccessible area of the unit.

Fig. 100

3. Note and disconnect burner gas piping (1, Fig. 101) connections.

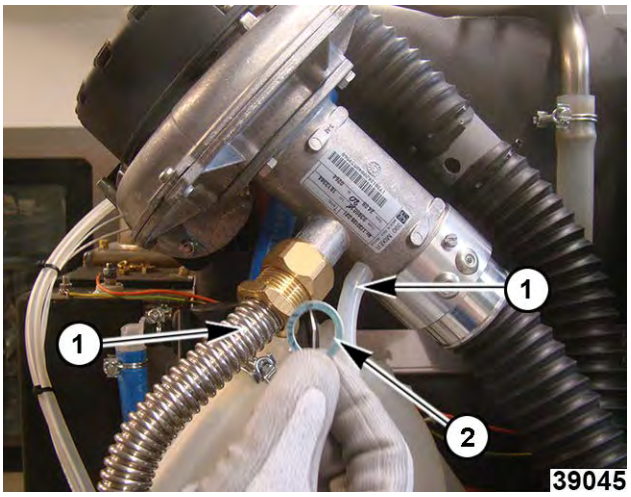


Fig. 101

NOTE: Place a clean rag (1, Fig. 102) over the open area to avoid nuts falling to where they can't be retrieved.

4. Remove (6) 8mm mounting nuts (2, Fig. 102).

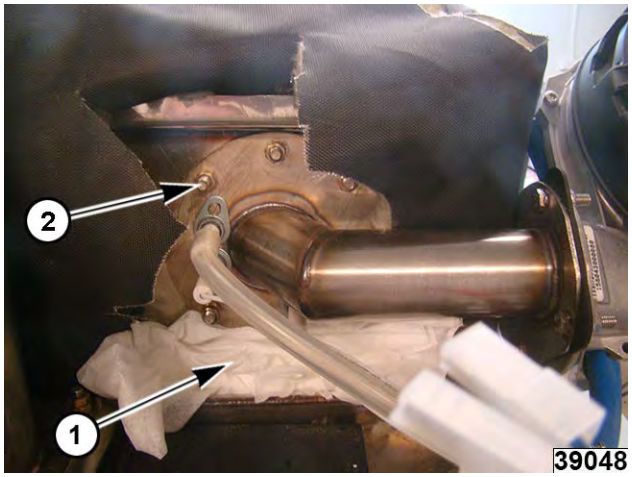


Fig. 102

5. Slide burner out of unit.
6. Remove burner from blower.

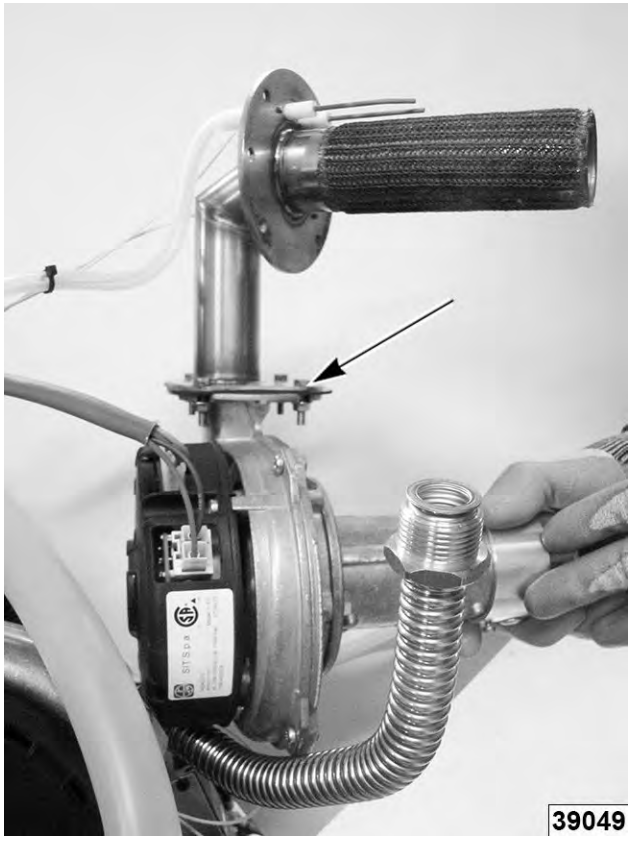


Fig. 103

NOTE: If installing a new burner, remove ignitor and flame sense and reinstall into new burner.

7. Reverse procedure to install.

NOTICE

Carefully watch ignitor and flame sense rods when reinstalling not to hit / bump side walls of hat exchanger.

8. Verify IGNITOR AND FLAME SENSE GAP.
9. Verify proper operation.

GAS VALVES

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

NOTE: There are two gas valves on each Chef Combi gas unit. One is the cavity gas valve and the other one is the steam generator gas valve.

1. Remove LEFT PANEL.
2. Note and disconnect gas lines (2, Fig. 104) from gas valve.

FRONT - CAVITY GAS VALVE

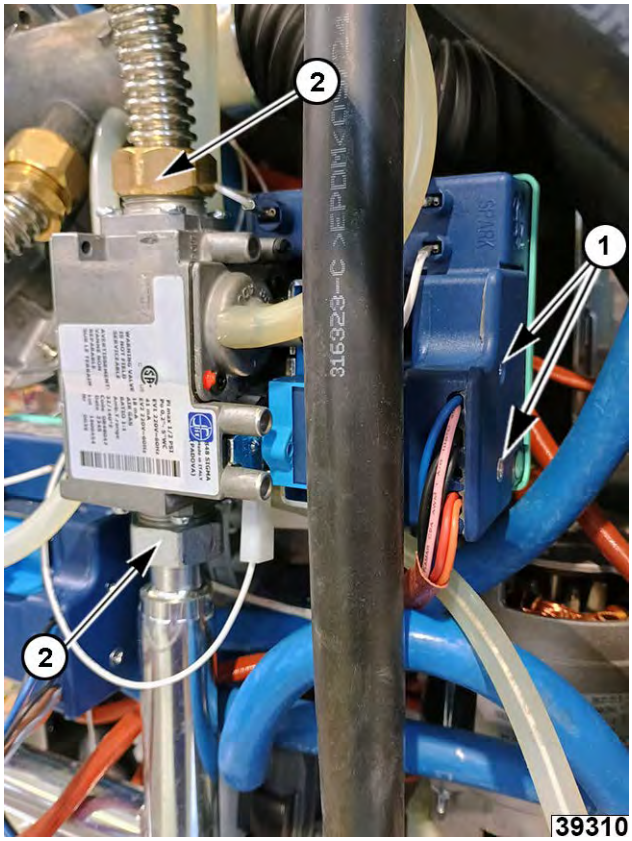


Fig. 104

BACK - STEAM GENERATOR GAS VALVE

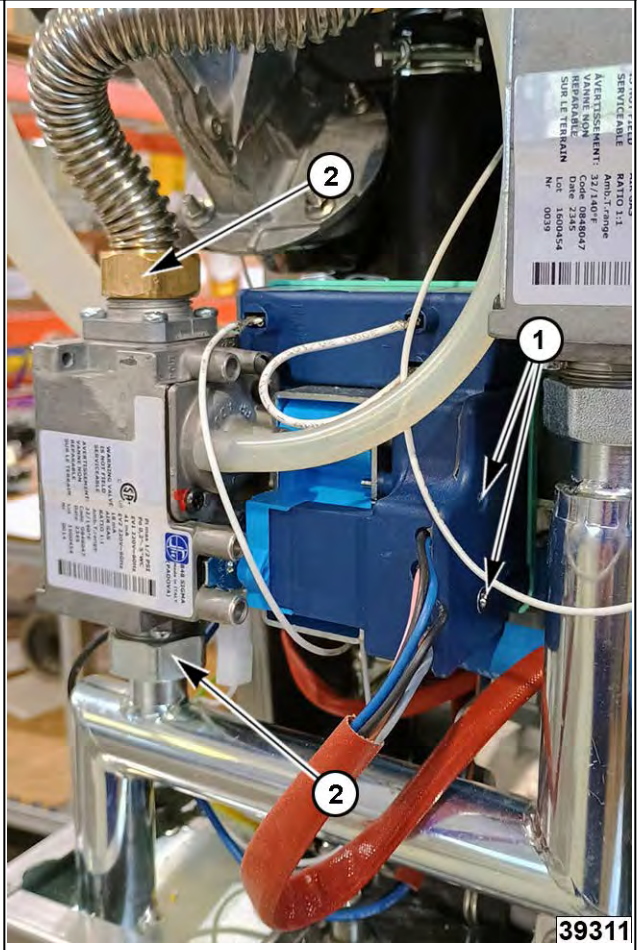


Fig. 105

3. Remove gas valves from unit.
4. Remove ignition module mounting screw (1, Fig. 105) to separate from gas valve.
   - Top screw is mounting screw to gas valve.

NOTE: Note and disconnect wiring if removing ignition module from unit.

- Lower screw is removed to access wiring.

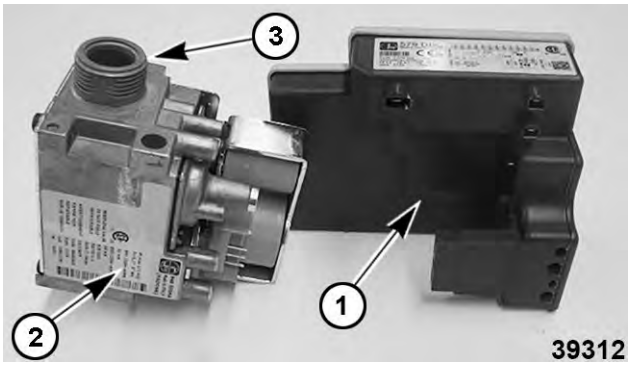
CALLOUT	COMPONENT	
1	Ignition Module	
2	Gas Valve	
3	Gasket	

Fig. 106

5. Install new gas valve(s).

   NOTE: If replacing gas valve(s), install new gasket.

6. Connect gas lines.
   A. Turn on power to oven.
   B. Turn on gas to oven.
   C. Turn on oven.
7. Perform GAS - GAS VALVE ADJUSTMENTas needed.
8. Confirm GAS - GAS PRESSURE and CO2.

GAS - COMBUSTION BLOWER

NOTE: There are two blowers, one connected to the steam generator burner and the other one to the cavity burner. Both have the same removal and installation procedure.

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove REAR PANEL.
3. Note and disconnect wire connectors.

Fig. 107

NOTE: When disconnecting gas pipes, there will be a gasket (2, Fig. 108). Take care not to lose gasket or it may fall into an inaccessible area of the unit.

4. Disconnect gas piping and tubing to gas valves (1, Fig. 108).

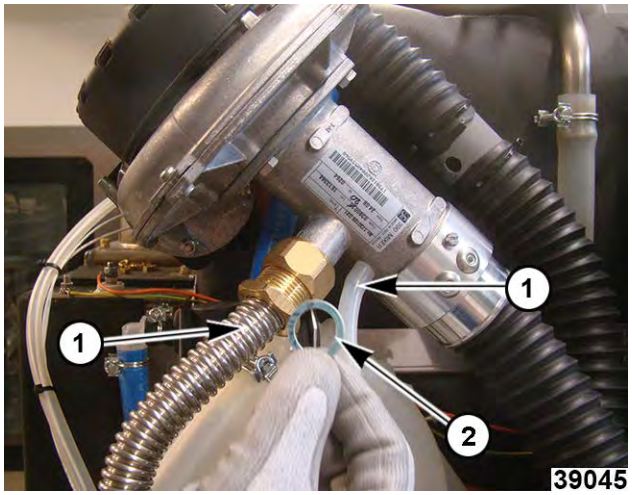


Fig. 108

5. Remove blower mounting screws (1, Fig. 109) from burner and venturi (2, Fig. 109).

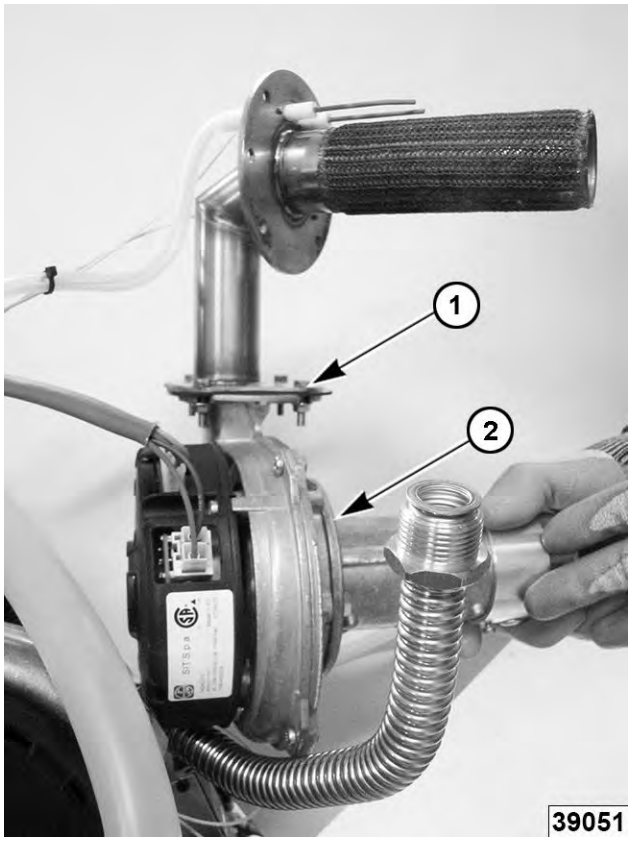


Fig. 109

6. Reverse procedure to install.

NOTICE

Verify GAS BURNER IGNITOR AND FLAME SENSE GAP.

7. Verify operation.

3. SERVICE PROCEDURES TEST AND ADJUSTMENTS

DESCALE

⚠ WARNING

When performing service work, corrosive chemicals may be present. Exposure to these chemicals could result in injury. It is very important to follow the manufacturer's instructions as found in the (Material) Safety Data Sheet/(M) SDS. Information regarding the Personal Protective Equipment (PPE) requirements can be found in the (M) SDS that accompanies product, or can be found online.

NOTE: Descale cycle enables the oven and steam generator to be descaled by force. The descaling process is used for a wash with descaling and is carried out automatically.

NOTICE

The number of Caresticks required for descale cycle varies according to the oven model.

NOTICE

Do not insert Caretabs or Caresticks into the oven unless explicitly requested to do so by the control interface.

1. Prepare oven.
   A. Remove trays and racks from oven cavity.
   B. Verify rack guides are correctly hung in oven.

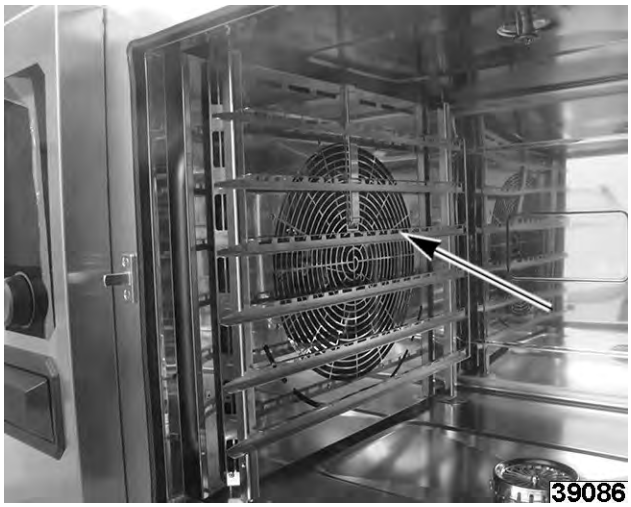


Fig. 110

   C. Verify core probe is in correct position.
   D. Remove USB core probe from cooking chamber.
   E. **Grease collection option only**: close grease drain valve.
2. Close door.
3. Open CombiCare menu.

Fig. 111

NOTE: The last cleaning program used is identified by grey tint. The cleaning program recommended is indicated by a flashing star in the top right corner of the button. Extra functions may be added.

4. Select cycle.
5. Select **DESCALING**.

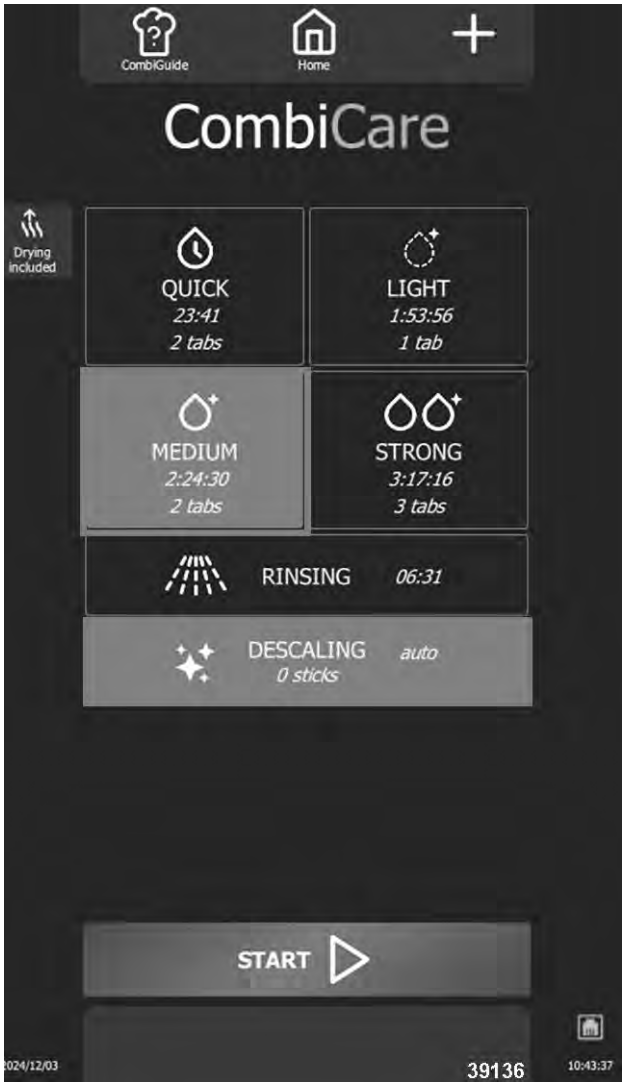


Fig. 112

6. Press **START**.
   - Display shows the initialization stage. If temperature of cooking chamber is 194°F (90°C) or higher, the cooling function starts automatically before the start of cleaning cycle.
   - At the final initialization stage, a screen will prompt you to insert descaling product (Carestick) required for cleaning program.
7. Open oven door.

⚠ WARNING

Refer to instructions use and handling of cleaning product tablets.

⚠ WARNING

When performing service work, corrosive chemicals may be present. Exposure to these chemicals could result in injury. It is very important to follow the manufacturer's instructions as found in the (Material) Safety Data Sheet/(M) SDS. Information regarding the Personal Protective Equipment (PPE) requirements can be found in the (M) SDS that accompanies product, or can be found online.

8. Unpack and place Caretabs in drain grate and Caresticks in descaling compartment.

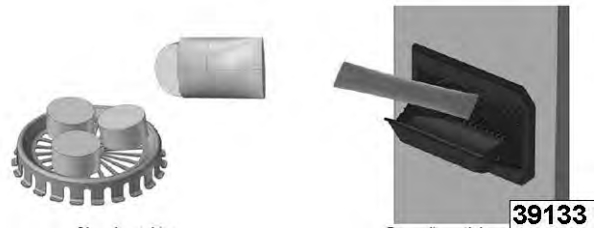


Fig. 113

NOTE: Insert the number of cleaning tablets indicated on control panel.

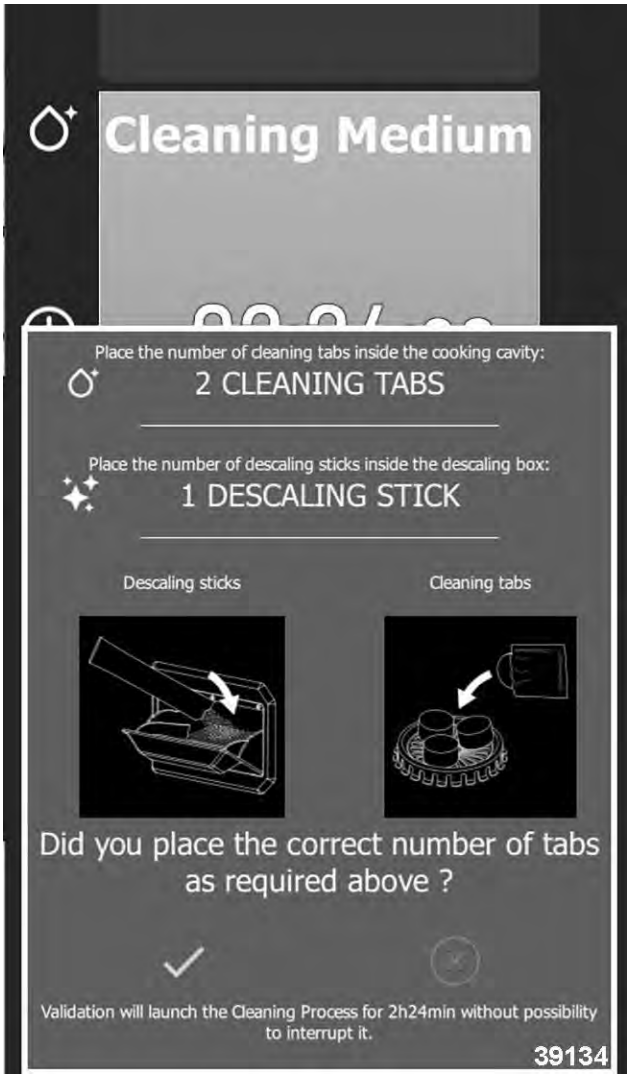


Fig. 114

9. Close descaling compartment.
10. Close door.

NOTE: Automatic cleaning starts. Display shows various steps of the program as well as a counter for elapsed time, remaining time and a percentage bar graph. A signal will sound when program is complete.

Fig. 115

11. Press **«** □ **»** icon when program ends.

NOTE: Screen will display **HOME** menu.

Fig. 116

SOLENOID VALVES

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Disconnect supply power.
2. Remove REAR PANEL.
3. Locate solenoid to check.
   - Access Yi, Yf and Yc.
   - Verify reading is 4500 ohms +/-10%.

Fig. 117

TWO-WAY SOLENOID VALVE - COLD WATER		
Ycond	Condenser Solenoid Valve	2,7 l/min
Yspray	Solenoid Valve for Spray Hose	10 l/min

THREE-WAY SOLENOID VALVE - COLD WATER		
Y steam generator	Solenoid Valve for Steam Generator Filling	5,5 l/min
Y cool	Cooling Solenoid Valve	1,1 l/min
Ydescal.	Descaling Solenoid Valve	1,1 l/min

RESET IN SAFE MODE

NOTE: Safe Mode enables you to go into safe mode with minimal configuration. Only the ambient temperature: default temperature is 356°F, and the cooking mode: dry heat cooking mode are indicated.

1. Hold down encoder button until unit powers on. Select **RESET** after Welcome screen loads.

Fig. 118

2. Select **SAFE MODE** and when Reset screen loads.

   Confirm by pressing **«** □ **»** icon.

Fig. 119

NOTE: On confirmation, the continuous icon appears on the display, indicating cooking similar to continuous cooking mode. When screen is pressed, an information message appears, indicating the following:

Fig. 120

- In the event of a problem with the screen, this mode can be obtained by successively opening the door 3 times within 5 seconds at power-up.

- **Restart:** Restart the interface This option performs a basic restart of the Chef's Combi interface. No customer-configured parameters are affected.
- **Reboot:** Restart with reset This function restarts unit and exits the current cycle. No customer-configured parameters are affected.
- **Reset default settings:** This function resets current settings and user profiles. Access to this action is protected by a PIN code (Level 5 or 7), guaranteeing the security of the process. In particular, it deletes parameters, profiles, customer protocols, manufacturer protocols and customer photos. After a reset, it is necessary to redo the CO control and steam generator calibration.

⚠ WARNING

All parameters configured and copied by the customer, such as settings, profiles, protocols (recipes), photos, etc… will be DELETED!

- **Deploy update from USB:** Reinstall an update from a USB stick This feature is active when a USB key is connected to the appliance. It allows you to reinstall (force) an update from a USB key.
- **Redeploy / Reinstall last update:** This menu allows you to reinstall the latest update installed on the appliance. It is essential to select this option when corrupted parameters have been installed or detected by the appliance. A clean backup is kept on the SD card.

CONVECTION MOTOR RESISTANCE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Disconnect supply power.
2. Unplug convection fan motor.
3. Test connections. Verify 24.4 / 56Ω (Model Variable).
4. Install back cover and verify proper operation.

	Half size Motor	Full size Motor
L1	56 Ω	20.4 Ω
L2	56 Ω	20.4 Ω
L3	56 Ω	20.4 Ω

Values tolerence +/-15%

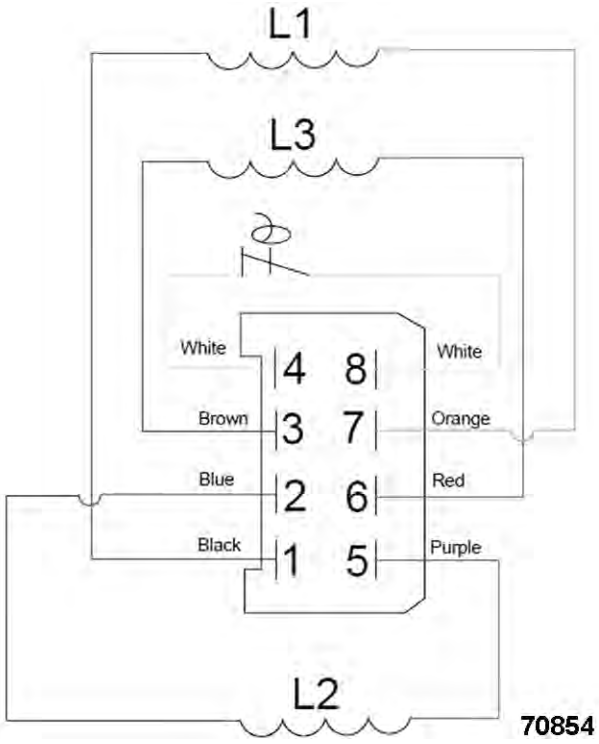


Fig. 121

STEAM GENERATOR & CORE/ CAVITY PROBE CALIBRATION

NOTICE

Steam Generator calibration is **ONLY** to be done when oven is first started up or the steam generator or elements are replaced. Under no circumstances should the calibration be done for any other reason. These are systematically done during the steam generator calibration procedure which takes about 10 minutes. If a measured value is inconsistent during the process, interrupt check immediately by pressing 'Reject' button. Turn oven off and check probe(s) concerned. Replace faulty components if necessary.

1. Close oven door.
2. From **HOME** menu, select **SETTINGS** button.

Fig. 122

3. Select INSTALLER and enter PIN CODE **(Level 5 or 7)** for installer.

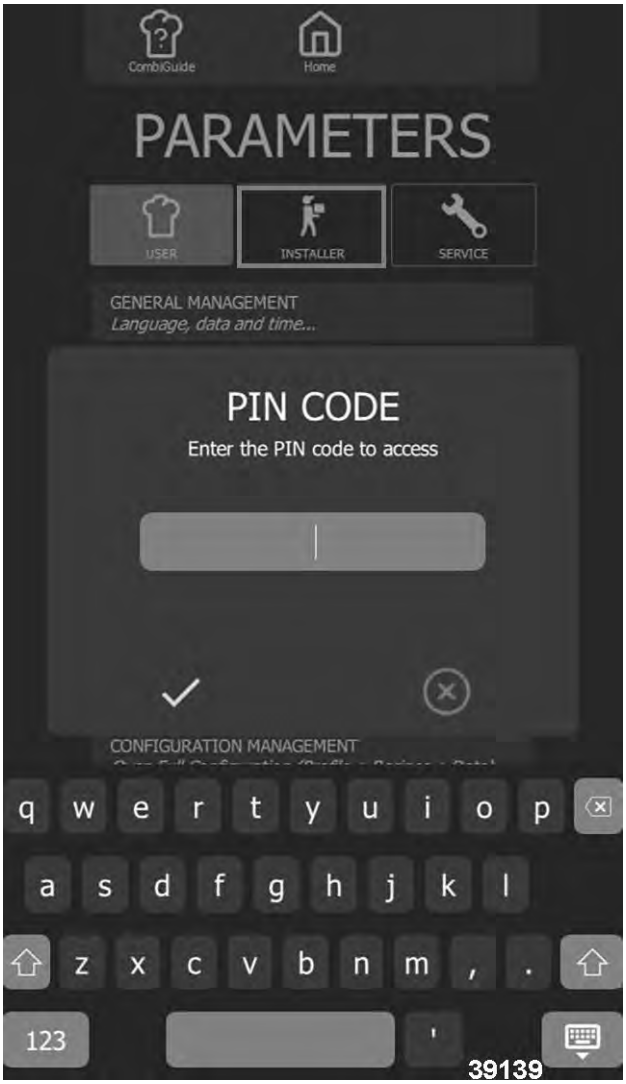


Fig. 123

4. Confirm by selecting **«** □ **»** icon.
5. Select **STEAM GENERATOR CALIBRATION**.

Fig. 124

6. Confirm by selecting **«** □ **»** icon.

Fig. 125

7. Follow actions shown on display and select **CONTINUE** when necessary.

Fig. 126

8. Select **"□ "** to validate or **"X"** reject when calibration results are displayed.

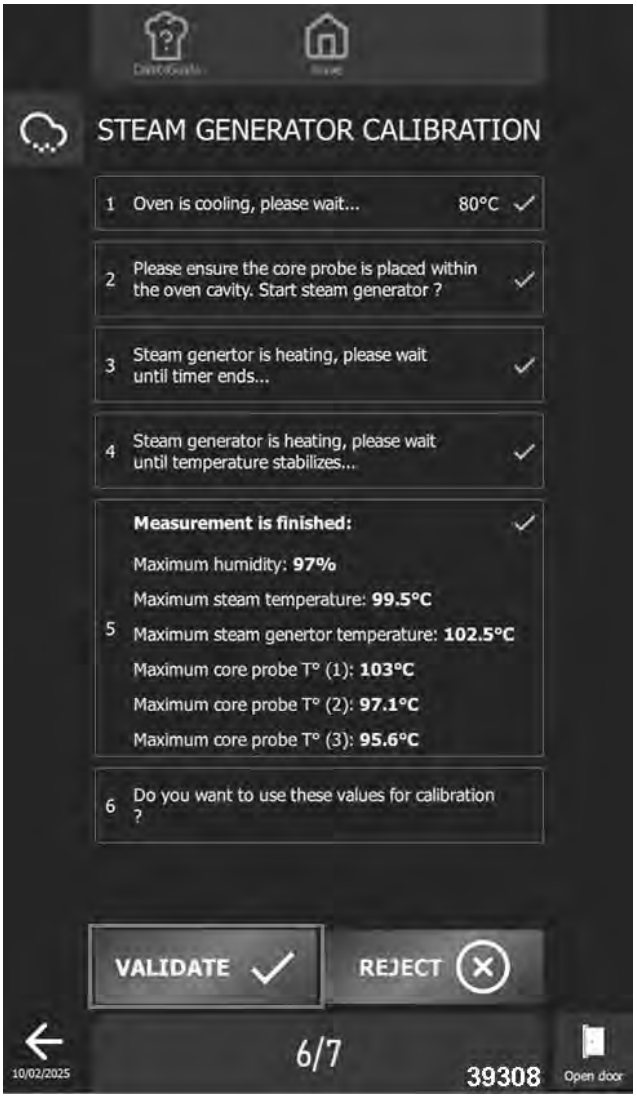


Fig. 127

9. Select **"End"** icon to return to previous screen when calibration results are displayed.

SET-UP SD CARD

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

NOTE: SD card: Mini 4GB / FAT32 formatted.

1. Access SD card on DISPLAY BOARD.

Replace SD Card on Faulty Interface Card.

A. When replacing interface card, recover the SD card content from current SD card.

B. Insert SD card into new interface board.

C. Start oven.

D. When oven starts up, the system will detect there is no configuration and will offer to copy the configuration.

1) Accept to copy configuration.

NOTE: Oven will be configured with previously saved settings.

2) Reuse, or if SD card is corrupted, configure oven manually by following instructions (Troubleshooting - Reset).

Insert a Blank SD Card Into Interface Card

A. Insert SD card into new interface board.

B. Start oven.

C. Accept to configure oven.

D. Configure oven manually by following instructions (Troubleshooting - Reset).

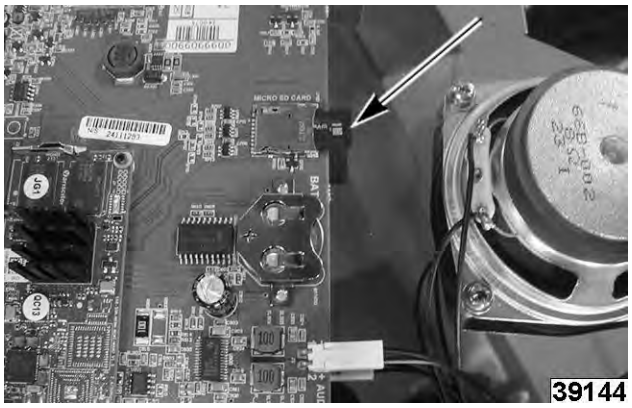


Fig. 128

ELECTRIC - HEATING ELEMENT TEST

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove LEFT PANEL.
2. Remove cable/wire connected to component.
3. Check resistance.
4. Remove one wire on one side of element to prevent false reading.
5. Verify ohms.

Cavity Heating Elements								
Bonnet Code	**Total Nominal Power (kW)**	**Power per Element (W)**	**Voltage (VAC)**	**Nominal Resistance (Ohm)**	**Resistance Min (Ohm) Cold Conditions**	**Resistance Max (Ohm) Cold Conditions**	**Current Min (A)**	**Current Max (A)**
302304	10.3 kW	3433	208	12.6	11.5	13.5	15.41	18.09
302305	10.3 kW	3733	240	15.43	14.1	16.5	14.55	17.02
302306	10.3 kW	3433	277/480	22.35	12.1	14.2	19.51	22.89
302298	21.6 kW	3600	208	12.02	10.9	12.9	16.12	19.08
302299	21.6 kW	3917	240	14.71	13.4	15.7	15.29	17.91
302300	21.6 kW	3600	277/480	21.31	13.4	15.7	17.64	20.67

Cavity Heating Elements								
Bonnet Code	**Total Nominal Power (kW)**	**Power per Element (W)**	**Voltage (VAC)**	**Nominal Resistance (Ohm)**	**Resistance Min (Ohm) Cold Conditions**	**Resistance Max (Ohm) Cold Conditions**	**Current Min (A)**	**Current Max (A)**
302295	18.0 kW	3000	208	14.42	13.2	15.5	13.42	15.76
302296	18.0 kW	3267	240	17.63	16.1	18.9	12.7	14.91
302313	18.0 kW	3000	277/480	25.58	16.1	18.9	14.66	17.2
302301	14.0 kW	2333	208	18.54	16.9	19.8	10.51	12.31
302302	14.0 kW	2533	240	22.74	20.7	24.3	9.88	11.59
302303	14.0 kW	2333	277/480	32.89	30	35.1	7.89	9.23

Steam Generation Immersion Heaters								
Bonnet Code	**Total Nominal Power (kW)**	**Power per Element (W)**	**Voltage (VAC)**	**Nominal Resistance (Ohm)**	**Resistance Min (Ohm) cold Conditions**	**Resistance Max (Ohm) Cold Conditions**	**Current Min (A)**	**Current Max (A)**
303146	9.0 kW	1500	208	28.84	27.2	31.8	6.54	7.65
303148	9.0 kW	1500	240	38.4	33.3	39	6.15	7.21
303150	9.0 kW	3000	277/480	25.58	23.8	27.9	9.93	11.64
303149	17.5 kW	2917	240	19.75	17.1	20	12	14.04
303147	17.5 kW	2917	208	14.83	14	16.4	12.68	14.86
303151	17.5 kW	5833	277/480	13.15	12.2	14.4	19.24	22.7

GAS - ELECTRODES (GAS BURNER IGNITOR AND FLAME SENSE)

NOTICE

Procedure to check unusual noise from burners, loud ignition, detonation, etc. Incorrect electrodes adjustment can cause abnormal noise.

Tools: Rod / Gauges

- Rod / gauge by 6mm diameter for electrode flame detection. Can use 6mm Allen wrench.
- Rod / gauge by 3mm and 4mm diameters for ignition electrodes. Can use 3mm or 4mm Allen wrench.

1. Remove burner being checked.
   - GAS - BURNER (CAVITY / UPPER)

     OR

   - GAS - BURNER (STEAM GENERATOR - LOWER)
2. Take a photo to verify position of ignition electrodes.
3. Measure dimensions as shown in Fig. 129 and Fig. 130.

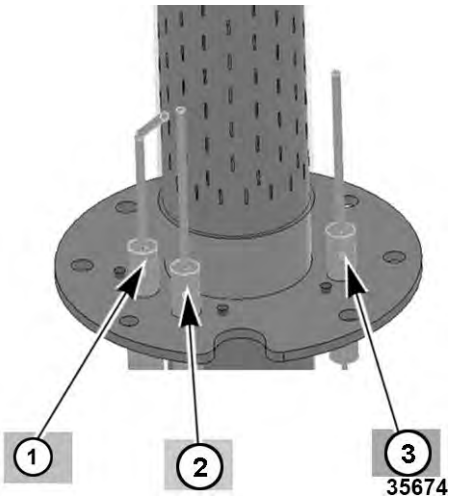


Fig. 129

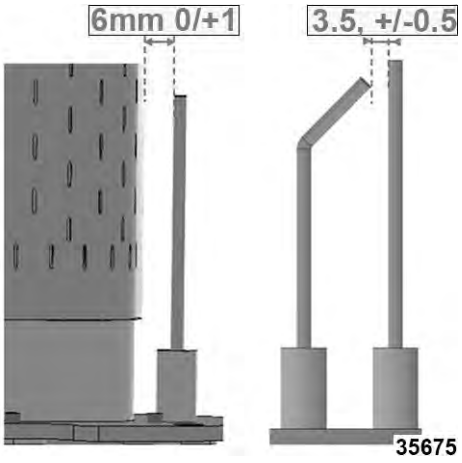


Fig. 130

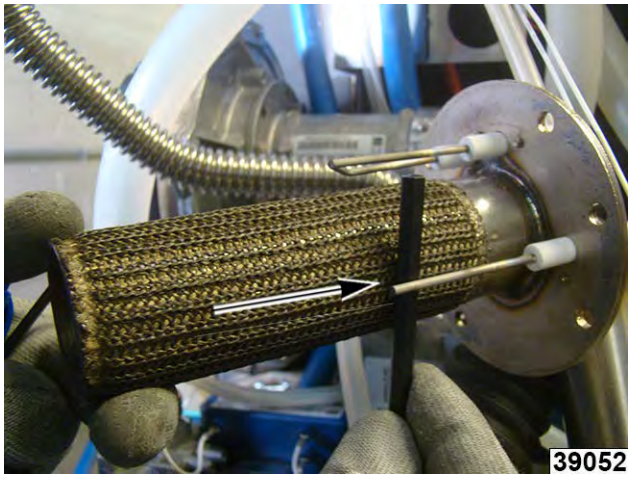


Fig. 131

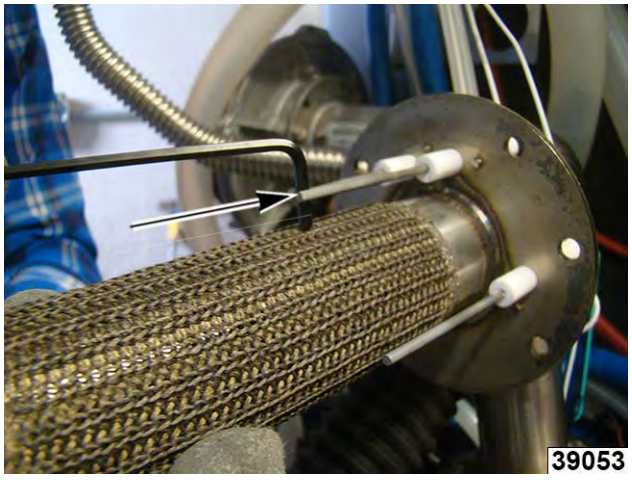


Fig. 132

4. Bend electrodes if needed to adjust to accurate dimensions.
5. Visually check electrodes for deposits. Clean if needed.
6. Change electrodes if unable to clean or get adjusted.
7. Reverse procedure to install new ones.
8. Verify proper operation.

NOTICE

Carefully slide burner back into oven so you do not bump the electrodes out of adjustment.

GAS - GAS VALVE ADJUSTMENT

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

⚠ WARNING

Evacuation of combustion gases must comply with local codes.

⚠ WARNING

These adjustments are only to be made during the Gas-Combustion Analysis procedure.

NOTE: This procedure is only to be performed if there is an issue with burner performance or gas type has been changed.

NOTICE

The CO2 percentages measured must correspond to required value within +/-0.2% for the gas type. Refer to: CO2% TABLES. Repeat adjustment procedures as necessary to obtain required value.

1. Remove LEFT PANEL.

   Low Speed (4mm tool) Adjustment Screw

   A. Remove protective cap from adjustment screw (2, Fig. 133 & Fig. 134).

   B. Adjust setting by tightening/loosening the screw (4mm Allen wrench or Torx T25 Tool) a maximum of one turn at a time (1% = 1 turn).

      - Turn clockwise to increase Low Speed (4mm tool) CO2 adjustment level (2, Fig. 133 & Fig. 134).

- Turn counterclockwise to decrease Low Speed (4mm tool) adjustment level (2, Fig. 133 & Fig. 134).

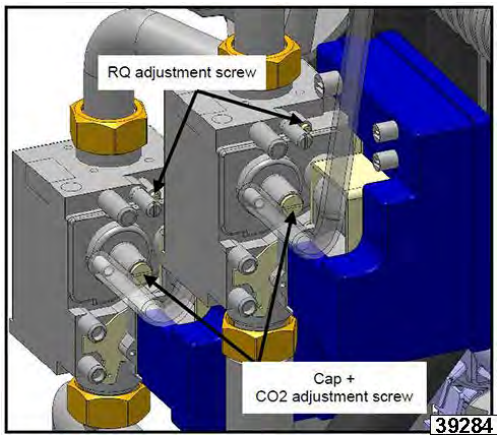


Fig. 133

2. When complete, replace protective cap.
3. High speed adjustment.

High Speed (2.5mm tool) (CO2) Adjustment Screw (RQ)

A. Adjust High Speed (2.5mm tool or Torx T10), adjustment screw (RQ) (1, Fig. 133 & Fig. 134) on gas valve to set high speed CO2.

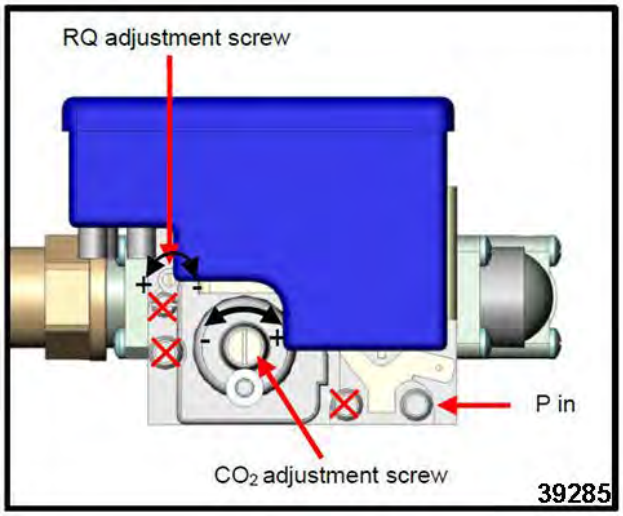


Fig. 134

B. Adjust setting by screwing/unscrewing the screw using a 2.5mm Allen key or Torx T10, a maximum of a quarter turn at a time.

1) Counterclockwise to increase High Speed (2.5mm tool) CO2 adjustment (1, Fig. 133 & Fig. 134).

2) Clockwise to decrease High Speed (25mm tool) adjustment (1, Fig. 133 & Fig. 134).

C. Verify CO rate is less than 150ppm.

Burner Dry Heat	CO2% - LOW SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.4 ±0.2	10.7 ±0.2	10.1 ±0.2	10.0 ±0.2
Propane Gas (GE)	11.5 ±0.2	11.5 ±0.2	11.5 ±0.2	11.7 ±0.2

Burner Dry Heat	CO2% - HIGH SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.3 ±0.2	10.4 ±0.2	9.9 ±0.2	10.1 ±0.2
Propane Gas (GE)	11.5 ±0.2	11.8 ±0.2	11.6 ±0.2	11.8 ±0.2

Burner (Generator) Steam heat	CO2% - LOW SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.6 ±0.2	10.4 ±0.2	9.5 ±0.2	9.5 ±0.2
Propane Gas (GE)	11.4 ±0.2	11.7 ±0.2	10.9 ±0.2	11.7 ±0.2

Burner (Generator) Steam heat	CO2% - HIGH SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.2 ±0.2	10.3 ±0.2	9.7 ±0.2	9.6 ±0.2
Propane Gas (GE)	11.6 ±0.2	11.4 ±0.2	11.1 ±0.2	11.7 ±0.2

GAS - GAS PRESSURE

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

Checking Gas Valve for Leaks

1. Spray gas pipes with leak detector to verify there are no leaks.
2. Verify pressure on the gas valve on the supply side:
   A. Unscrew pressure screw by 2 to 3 turns and open gas valve.

Fig. 135

   B. Connect water column hose to pressure tap and close gas valve.

Fig. 136

   C. Monitor the water column level for 1 minute. An unchanged reading at -1 mbar is expected.
3. Check the static pressure (appliance not in operation):
4. Turn gas back on.
5. Check the pressure using a manometer.

NOTICE

The reading must be the same as or higher than the pressure specified on the nameplate.

6. Check the connection pressure/dynamic pressure:
   A. Connect a manometer to the pressure tap when burner is in operation (all gas appliances in operation, burners on).
   B. Gas pressure measured this way must be within the pressure range indicated on nameplate for the gas used.
   C. Verify correct burner operation by performing combustion analysis.

GAS - COMBUSTION ANALYSIS

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

NOTE: This procedure is only to be performed if there is a burner performance issue or gas type has been changed.

NOTICE

Verify oven is connected to water, wastewater, and gas systems.

1. Set gas combustion analyzer or manometer to CO2 for a calculation result of "CO2 rate in %".
2. Select **SETTINGS** on **HOME** screen.

Fig. 137

3. Log into **SERVICE** tab with PIN CODES **(SERV)** (Level 7) and confirm by pressing **«** □ **»** icon.

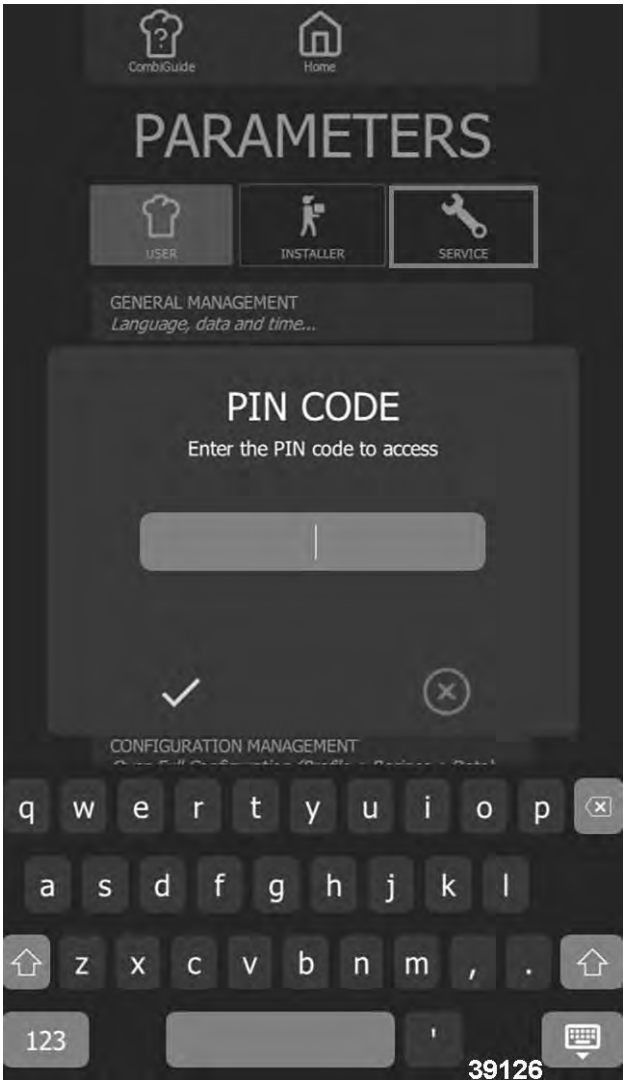


Fig. 138

4. Select **CO2 CONTROL & ADJUSTMENTS**.

Fig. 139

5. Confirm selection by pressing **«** □ **»** icon.
6. Verify gas type matches oven's supply gas.

NOTICE

GA = Natural Gas and GE = Propane Gas and used in the US and Canada. International gas types, G20, G25, G30 and G31 listed in software are not used in the US or Canada.

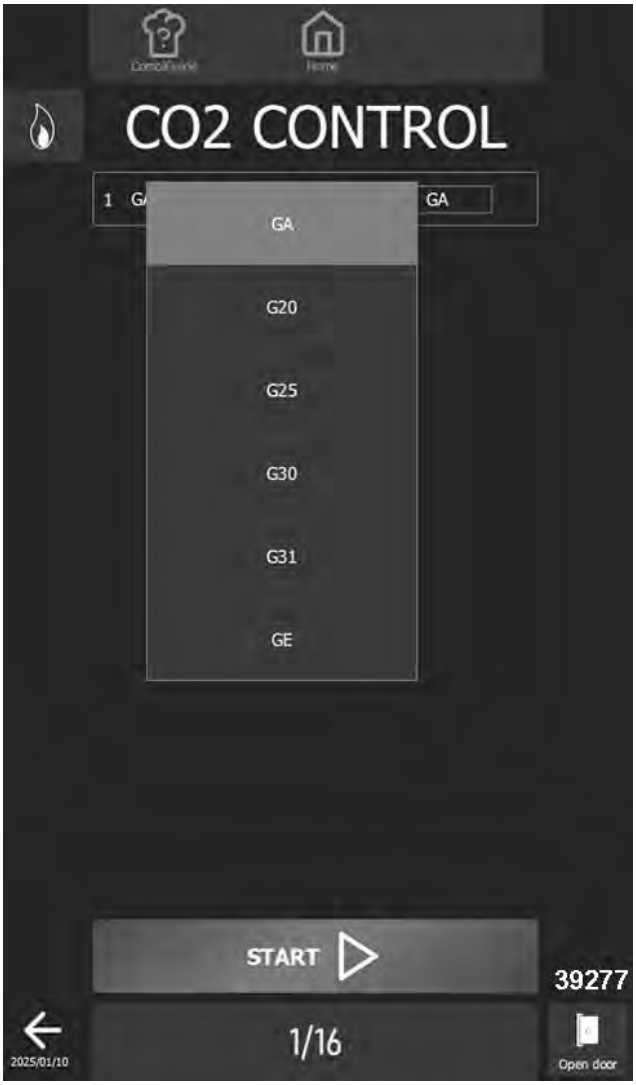


Fig. 140

7. Start test by selecting **START**.

Fig. 141

8. Place probe of gas combustion analyzer in cooking cavity flue gas chimney."

Fig. 142

9. Open oven door.

Fig. 143

10. Select **CONTINUE**.

Fig. 144

11. Follow information displayed on the oven screen and confirm by selecting **«** □ **»** icon if measurement values are correct.

NOTICE

The percentage of CO2 measured must correspond within +/- 0.2% to the required value for the gas type in the table below. Each check is performed on 3 measurement readings.

NOTE: If the percentage of CO2 measured does not correspond to that requested for the gas used in the table above, adjust the setting screws.

NOTE: Evacuation of combustion gases must comply with local codes.

12. Perform a GAS VALVE ADJUSTMENT if percentage of CO2 measured does not correspond to that requested for gas used in TABLES below.

NOTICE

In oven software, GA = Natural Gas and GE = Propane.

Burner Dry Heat	CO2% - LOW SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.4 ±0.2	10.7 ±0.2	10.1 ±0.2	10.0 ±0.2
Propane Gas (GE)	11.5 ±0.2	11.5 ±0.2	11.5 ±0.2	11.7 ±0.2

Burner Dry Heat	CO2% - HIGH SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.3 ±0.2	10.4 ±0.2	9.9 ±0.2	10.1 ±0.2
Propane Gas (GE)	11.5 ±0.2	11.8 ±0.2	11.6 ±0.2	11.8 ±0.2

Burner (Generator) Steam heat	CO2% - LOW SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.6 ±0.2	10.4 ±0.2	9.5 ±0.2	9.5 ±0.2
Propane Gas (GE)	11.4 ±0.2	11.7 ±0.2	10.9 ±0.2	11.7 ±0.2

Burner (Generator) Steam heat	CO2% - HIGH SPEED			
	61 Models	62 Models	101 Models	102 Models
Natural Gas (GA)	10.2 ±0.2	10.3 ±0.2	9.7 ±0.2	9.6 ±0.2
Propane Gas (GE)	11.6 ±0.2	11.4 ±0.2	11.1 ±0.2	11.7 ±0.2

13. Follow "step by step" actions displayed on oven screen and validate if measurements values are correct for each step.

14. Place probe of gas combustion analyzer in steam generator flue gas chimney.

Fig. 145

15. Close oven door and select **CONTINUE**.
16. Follow information displayed on oven screen and confirm by pressing **«** □ **»** icon if measurement values are correct.
17. For incorrect values, adjust large (low speed) (CO2) or small (high speed) (CO2) adjustment screw or both on the corresponding gas valve, then confirm by pressing **«** □ **»** icon. Refer to: GAS VALVE ADJUSTMENT.
18. Press **END** when display shows "Full control / adjustment achieved" to return to the previous screen.

GAS - CHANGE OF GAS SUPPLY

⚠ WARNING

Connection/disconnection of the gas supply, as well as any maintenance or interventions are subject to the local legislation in force.

⚠ WARNING

Verify appliance settings correspond to the type and pressure of the gas supplied to the installation. GA = Natural Gas and GE = Propane Gas in software.

⚠ WARNING

Gas connection must be installed and serviced by a qualified, certified gas fitter.

⚠ WARNING

The change of gas type can only be carried out by an authorized technician. Before any intervention, check with equipment owner which gas is currently in use in the facility. Ensure you are equipped with suitable measuring instruments (combustion analysis, manometer, gas leak detector etc.) and that they are in full working order. Without these instruments it is prohibited to carry out any gas-related maintenance or adjustment.

NOTICE

In software settings, GA = Natural Gas and GE = Propane Gas and is used in US and Canada only. International gas types, G20, G25, G30 and G31 listed in software are not used in the US or Canada.

⚠ WARNING

Chef Combi Oven only requires an orifice when using propane gas as the supply gas.

⚠ WARNING

The gas connection pipe must be sized according to nominal heat output and type of gas indicated on oven nameplate. Cross-section gas pipe must be at least 3/4".

⚠ WARNING

Connect oven to gas supply pipe using a shut-off valve to isolate oven from the rest of the installation.

⚠ WARNING

All connecting parts on installation site must be certified for gas use (e.g. NF gas; DVGW). - A gas appliance with a mobile base must be installed using: In EU: "Flexible gas approved in accordance with the regulations in force. (eg : NF TUBOGAZ length 0.75 m, Ø 15/21 (½")" without flexible coupling, to be examined periodically and replaced if necessary.

⚠ WARNING

Flue gas analysis must be carried out before commissioning and only by a technician approved by the manufacturer.

⚠ WARNING

Check gas supply for leaks using a suitable gas detector.

⚠ WARNING

Flue gas extraction must comply with local regulations.

⚠ WARNING

When in use, connecting the wrong type of gas and/or setting the burners incorrectly can lead to a serious risk of intoxication. Connect oven only to the type of gas used. Verify oven settings correspond to gas type and pressure of the gas installed. Carry out a FLUE ANALYSIS when oven is started for the first time. We recommend installing a CO detector at installation site.

⚠ WARNING

Oven is equipped with two gas burners: one for dry heating and one for the steam generator. It is essential to analyze combustion gases at outlets on both chimneys.

⚠ WARNING

Gas leaks = danger for the user! Check for leaks: This is a standard procedure and responsibility of service technician.

Gas Flow Rates and Powers				
Models	Gas Power		Gas Flow Rates	
	Natural Gas (GA) Btu/h	**Propane Gas (GE)** Btu/h	**Natural Gas (GA)**	**Propane Gas (GE)**
VICS61G / CHEF-61G	58006	54594	53.89	2.59
VICS62G / CHEF-62G	112601	102364	104.61	4.86
VICS101G / CHEF-101G	93834	88716	87.17	4.21
VICS102G / CHEF-102G	143310	136144	133.14	6.46

Chart of Gas Injectors					
	Gas Power		**Orifice**		
	Designation	**Pressure**	**Natural Gas (GA)**	**ø (1/100e)**	**Propane Gas (GE)**
	Family / Type	**(mbar) / (inch W.C.)**			
Burners	**Natural Gas (GA)**	16 - 25 / 6.5 - 10	-	-	-
Dry heat and Steam heat	**Propane Gas (GE)**	25 - 38 / 10 - 15	1	580	148 799

NOTE: According to the country of installation and the category of the appliance (indicated on the firm plate), the adaptation from one gas to another may require two operations:

Research into the operations required to change gas:

- **Oven Nameplate Check:** Category (ies) of equipment.
- Gas and pressure for which it is adjusted.
- In the following COUNTRY CHART, select:
- Gas and category of oven (previously identified).
- The gas and pressure checked new gas.
- Identify operations required when changing gas.

Countries Concerned	**Category and GAS OF ORIGIN (or new gas)**	**NEW GAS and Category (or gas of origin)**	**Required Operations**
	GAS	GAS	
US - Canada	Natural Gas (GA)	Propane (GE)	IN + RV

1. Prepare connection points.
   - Shut-off valve is fitted to isolate oven from the rest of installation.
   - Oven is installed in the space provided.
   - Verify oven is securely positioned to avoid any risk of slipping.
   - Verify oven settings correspond to the type and pressure of the gas supplied to the installation (► Rating plate).
   - Tools and measuring instruments needed for connections (monitoring of carbon dioxide CO2 and carbon monoxide CO), water column manometer, gas leak detector, etc.

   NOTICE

   Follow all codes and refer to INSTALLATION MANUAL.
2. Connect gas supply tightly to oven.
3. Remove LEFT PANEL.
4. Orifice needed for **PROPANE ONLY**.
   - **FOR PROPANE:** Install orifice at inlet on cavity venturi and steam generator venturi.
     1. Add gaskets to top and bottom of orifice.

Fig. 146

     2. Loosen gas line nut to venturi.

        Bottom Venturi Shown in Fig. 147

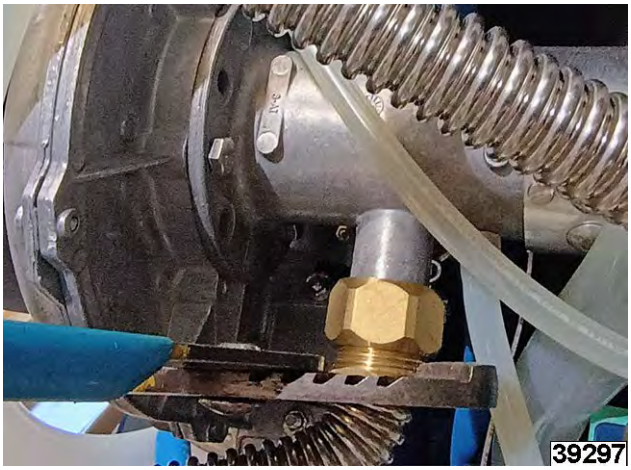


Fig. 147

3. Install orifice with both gaskets in gas line.

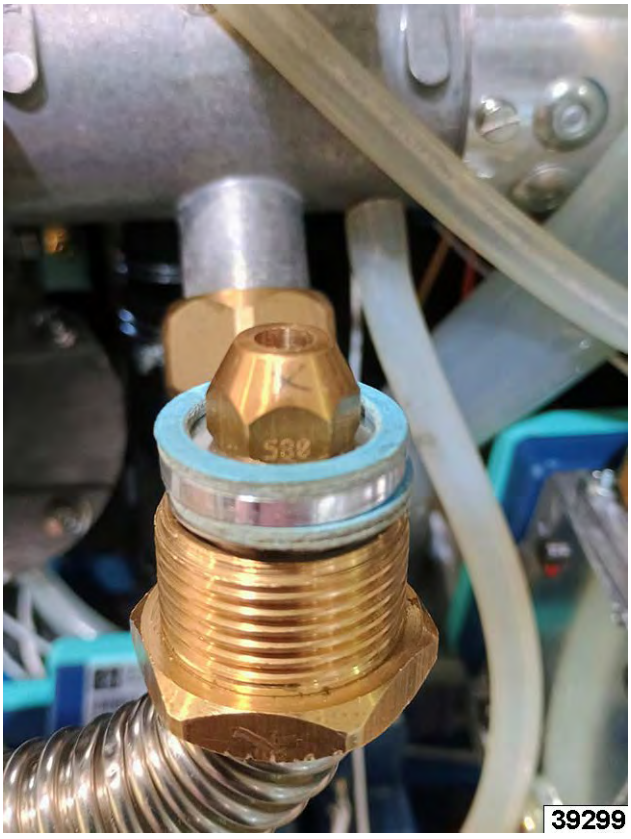


Fig. 148

4. Secure gas line nuts using two wrenches.

Fig. 149

- **⚠WARNING**

  Chef Combi oven only requires an orifice when using propane gas for supply gas.

- **If NATURAL is current gas:** install orifice.
- **If PROPANE is current gas:** remove orifice.

5. Check for leaks.
   A. Use leak detectors or spray to check the gas pipes and make sure there are no leaks.
   B. Check GAS PRESSURE on the supply side:
      1) Unscrew pressure screw by 2 to 3 turns and open gas valve.
      2) Connect water column hose to pressure tap and close gas valve.
      3) Monitor water column level for 1 minute.

         NOTICE

         An unchanged reading at -1 mbar is expected.

      4) Check static pressure.
         - Check pressure using a water column.
         - Reading must be same as or higher than pressure specified on nameplate.
6. Check pressure/dynamic pressure connection.
   - Connect water column pressure gauge to pressure tap when burner is in operation (all gas appliances in operation, burners on).
   - When checking gas pressure make sure everything on the gas line is turned on at 100% to verify no drop in pressure occurs.

- Gas pressure measured must be within pressure range indicated on nameplate for gas used.

7. Set measuring instrument to "CO2" for a calculation result of "CO2 rate in %".
8. Set up oven's new gas type during combustion analysis test
   A. Go to **HOME** menu screen and select **SETTINGS**.
   B. Screen will display **PARAMETERS** menu with **USER** tab selected.
   C. Select **SERVICE** tab.
   D. Enter PIN CODE (SERV) to access the "Service" parameters.
   E. Confirm by selecting **"□"** .

      NOTE: If code is correct, access to the screen is authorised; if not, return to entering PIN code.

   F. Select **CO2 CONTROL & ADJUSTMENT**.
   G. Confirm by selecting **"□"** .
   H. Set up the oven with the new gas.
      1) Press the gas type field.
      2) Select desired gas type (Gas A = GA, Gas E = GE).

   NOTICE

   In software settings, GA = Natural Gas and GE = Propane Gas and is used in US and Canada only. International gas types, G20, G25, G30 and G31 listed in software are not used in the US or Canada.

9. Perform test.
10. Select **END** to return to previous screw when display shows "Full control / adjustment achieved."
11. Fill in name plate with gas for what oven has been setup for.
12. Apply new name plate with new type of gas on oven.

4. FIRMWARE / SOFTWARE

UPDATE SOFTWARE

⚠ WARNING

Do not disconnect power supply to device or remove USB while software is being loaded. Oven use will be unavailable for the duration of this operation.

NOTE: USB drive Maximum Capacity = 32 GB, Formatted in FAT32 (default allocation unit size = 4096 bytes) or formatted in FAT (default allocation unit size = 32 Kilobytes).

1. Copy new software file from Hobart resource center. Instructions for downloading files are located on the Hobart Service Resource Center, under Cooking > Software Updates > General > Combi Ovens. File name: **CVxxx-SW.zip**.

   NOTE: Alternate Software Location: https://itwfeg.webdamdb.com/bp/#/assets

2. Unzip folder and copy executable file, **fastpad3_imxX_VX.X.XX.upd**, to a blank USB drive.
3. Turn oven on and wait until Welcome screen loads.

   NOTE: If necessary skip preheating.

Fig. 150

4. Insert USB after **HOME** page appears.

NOTE: USB socket has a protective cover. Lift cover up to insert USB drive.

5. **UPDATE** window will appear when USB is connected. Confirm by pressing **«** □ **»** icon.

6. Enter PIN code **(Level 5 or 7)** and software will start loading.

7. Remove USB when **WELCOME** screen appears.

   NOTE: Verify flap has closed as soon as USB socket is no longer in use.

Fig. 151

Fig. 152

PIN CODES

NOTICE

Access PIN codes are essential for entering settings menu for installer, user and maintenance. PIN codes ensure security and protection of sensitive settings on the Chef Combi oven. Keep these codes in a safe place and only share with authorised personal.

Code #	Description	Level	Remark
0000	Default user code.	1	Accessible in settings. Can be changed by the user.
CHEF	Emergency code for Chef.	1	If the password set by the Chef (user) is forgotten (after changing 0000).
INST	Installers	5	Access to installer parameters.
SERV	Service Technicians	7	Access to 1st level maintenance parameters.

SOFTWARE LANGUAGE

1. Turn on display by holding down encoder button until unit power-on Welcome screen is displayed.

Fig. 153

2. Wait for **HOME** menu to appear.
3. Select **LANGUAGES**.

Fig. 154

4. Select desired language.

5. PROGRAMMING

WATER TREATMENT CAPACITY

1. Select **SETTINGS** on the home menu screen.

2. Select **COOKING AND INSTALLATION CHOICES**.

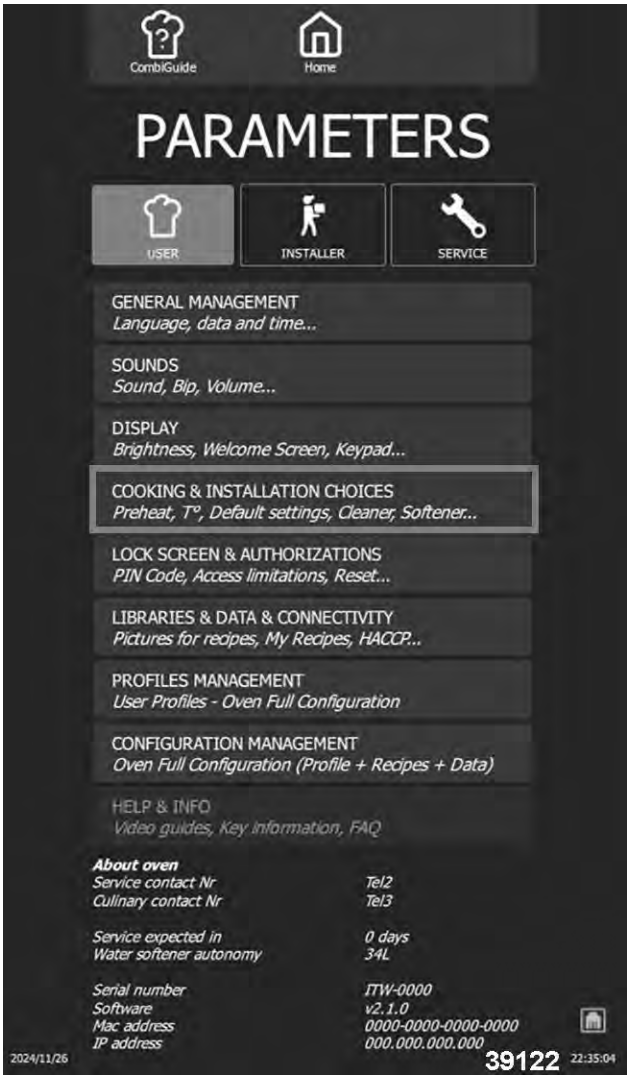


Fig. 156

3. Select *Capacity ####*'s.

Fig. 157

4. Enter capacity of water treatment system in liters and confirm by pressing "□ " icon.

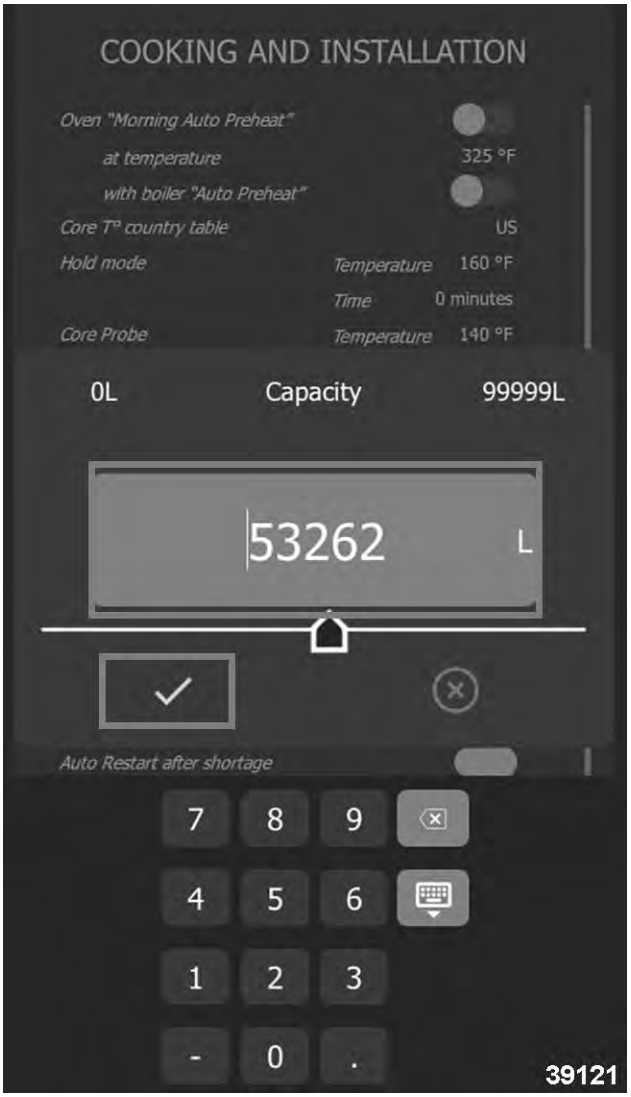


Fig. 158

NOTE: Adjustable from 0 to 99999L. The value defaults to **0** if there is no water treatment for oven. Reset counter if necessary, by selecting RESET, then confirm by pressing "□ " icon.

PARAMETERS

NOTICE

Service and installer parameter pages are password protected with PIN CODES for security purposes. Factory settings / values can be changed and will take effect immediately.

Parameter Settings

- Oven Serial Number and Model
- Oven Settings (Energy, Voltage, Frequency)
- Maintenance Diagrams
- Errors

- Counters
- Descaling Steam Generator
- Save Maintenance History

NOTE: Active when USB Drive is connected to oven.

Access Parameters

1. Go to **HOME** menu and select **SETTINGS**.

Fig. 159

2. Select **SERVICE** on parameters screen.

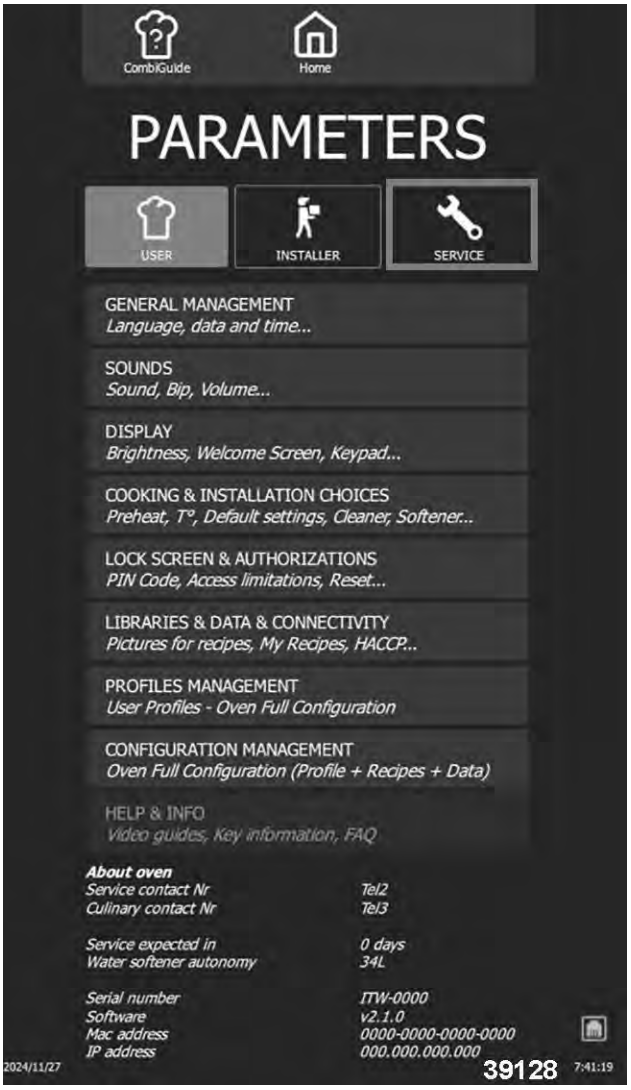


Fig. 160

3. Enter PIN CODE **(SERV)** and **CONFIRM « □ »**.

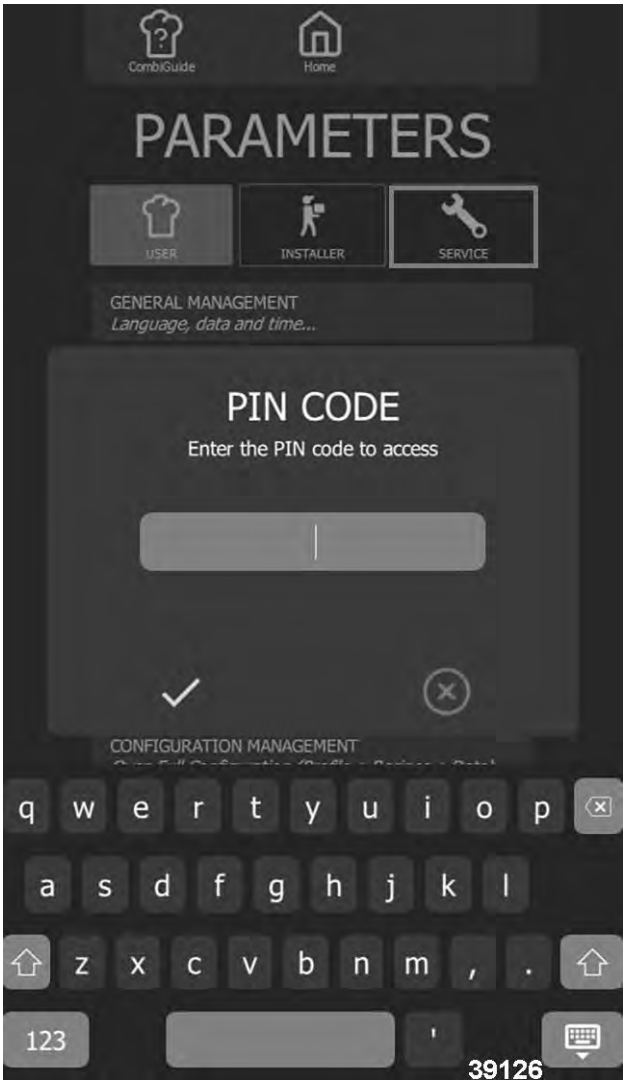


Fig. 161

NOTE: If code is correct, access is authorized, otherwise reenter PIN CODE.

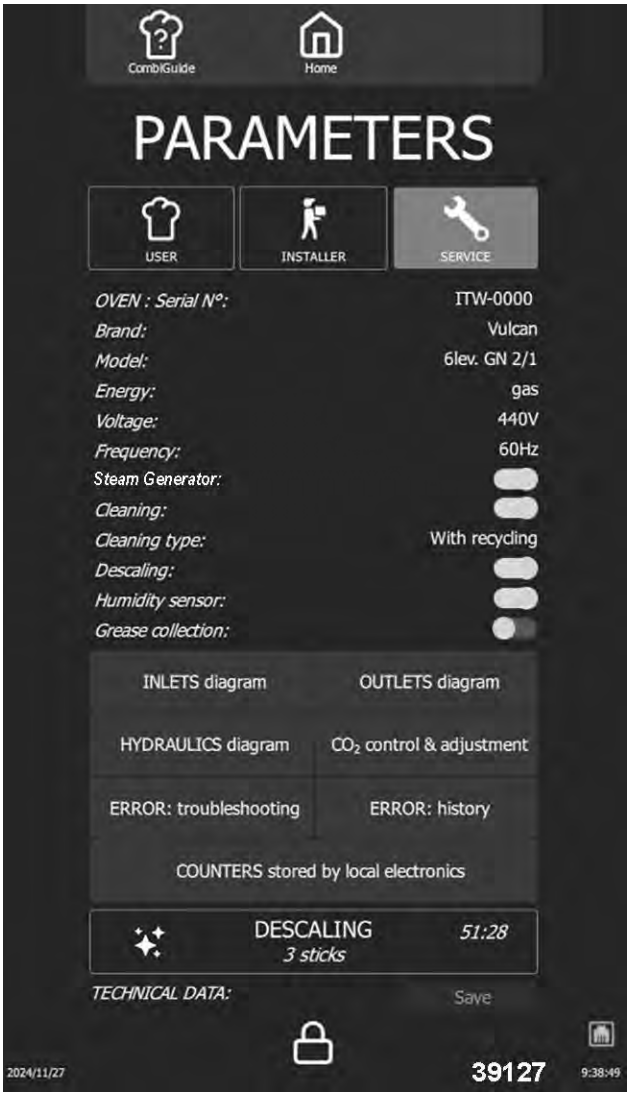


Fig. 162

SAVE PARAMETERS

Save function automatically exports all essential parameters and data to USB drive. Each type of data is saved in a separate file, including connectivity logs, errors, counters, cooking parameters and appliance configuration.

Fig. 163

COUNTERS

Counters screen lists all counters, with a history for the main counter.

NOTE: Some counters can only display current day's value, with no history of previous days.

- Total value since the oven was switched on.
- Values for the last 7 days (D, D-1, D-2, D-3... D-7).
- Values for the last 12 months (M, —1, —2, —3... —12).

Counters List	
Description	**Units**
Total operating time.	Seconds
Cooking time convection mode.	Seconds
Cooking time steam mode.	Seconds

Counters List	
Description	**Units**
Cooking time combi mode.	Seconds
Total time in cooking cycle.	Seconds
Total time in cleaning cycle.	Seconds
Hard water consumption.	Seconds
Softened water consumption.	Ounces
Elec. energy consumption.	kWh
Gas energy consumption.	CCF
Water consumption since last reset.	Gallons
Remaining water capacity.	Gallons
Hours elapsed since last service.	Hours
Remaining hours before service.	Hours
Cooking seconds elapsed since last cleaning.	Seconds
Cleaning status.	-
Number of completed cooking cycles.	-
Number of completed cleaning cycles.	-
Number of completed descaling cycles.	-
Total operating time.	Seconds
Cooking time convection mode.	Seconds
Cooking time steam mode.	Seconds
Cooking time combi mode.	Seconds
Total time in cooking cycle.	Seconds
Total time in cleaning cycle.	Seconds
Hard water consumption.	Gallons
Softened water consumption.	Gallons
Elec. energy consumption.	kWh
Gas energy consumption.	kWh
Elec. energy consumption last cycle.	kWh
Gas energy consumption last cycle.	kWh
Water consumption last cycle.	Gallons
Duration last cycle.	Seconds
Elec. energy consumption per cycle.	kWh
Gas energy consumption per cycle.	kWh
Water consumption per cycle.	Gallons
Average duration per cycle.	Seconds
Elec. energy consumption last hour.	kWh
Gas energy consumption last hour.	kWh
Water consumption last hour.	Gallons
Average duration last hour.	Seconds

Counters List	
Description	**Units**
Elec. energy consumption per hour.	kWh
Gas energy consumption per hour.	kWh
Water consumption per hour.	Gallons
Average duration per hour.	Seconds
Total cleaning CareStick consumption.	-
Total descaling CareTab consumption.	-
S01 CAVITY LIGHT (MOS).	-
S02 DAMPER (MOS).	-
S03 GREASE PUMP (MOS).	-
S04 DESCALING PUMP (RELAY).	-
S05 MUFFLE DRAIN PUMP (RELAY).	-
S06 BOILER DRAIN PUMP (RELAY).	-
S08 TECH FAN (RELAY).	-
S09 KP (RELAY).	-
S10 POWER HEAT 1 (RELAY).	-
S11 POWER HEAT 2 (RELAY).	-
S12 POWER HEAT G (RELAY).	-
S13 CLEAN PUMP (RELAY).	-
S15 SPRAY VALVE (RELAY).	-
S16 DESCALER DISSOLUTION VALVE (RELAY).	-
S18 CONDENSER VALVE (OPTO).	-
S19 COOLING VALVE (OPTO).	-
S20 BOILER FILLING VALVE (OPTO).	-

Counters List	
Description	**Units**
S22 FAN OPERATION (TRIAC).	-
S23 FAN DIRECTION (RELAY).	-
SR1 COOKING STATE (RELAY).	-
S01 CAVITY LIGHT (MOS).	Seconds
S02 DAMPER (MOS).	Seconds
S03 GREASE PUMP (MOS).	Seconds
S04 DESCALING PUMP (RELAY).	Seconds
S05 MUFFLE DRAIN PUMP (RELAY).	Seconds
S06 BOILER DRAIN PUMP (RELAY).	Seconds
S08 TECH FAN (RELAY).	Seconds
S09 KP (RELAY).	Seconds
S10 POWER HEAT 1 (RELAY).	Seconds
S11 POWER HEAT 2 (RELAY).	Seconds
S12 POWER HEAT G (RELAY).	Seconds
S13 CLEAN PUMP (RELAY).	Seconds
S15 SPRAY VALVE (RELAY).	Seconds
S16 DESCALER DISSOLUTION VALVE (RELAY).	Seconds
S18 CONDENSER VALVE (OPTO).	Seconds
S19 COOLING VALVE (OPTO).	Seconds
S20 BOILER FILLING VALVE (OPTO).	Seconds
S22 FAN OPERATION (TRIAC).	Seconds
S23 FAN DIRECTION (RELAY).	Seconds
SR1 COOKING STATE (RELAY).	Seconds

MAINTENANCE INTERVENTION FREQUENCY, DAILY USAGE RATE

NOTE: The frequency of maintenance interventions and rate of use per day are calculated in the table below according to information supplied by customer during installation. The number of hours appliance is used per day and type of cooking performed. It is the responsibility of the technician to verify settings correspond to actual use of the oven, and to modify them if necessary (according to table Frequency of Maintenance Work and Rate of Use per Day).

Frequency of Maintenance Work and Rate of Use per Day				
Type of Use (Customer Information)	**Hours of Day Use**		**Setting the installation parameters (to be entered in the Installation parameters)**	
			Maintenance every (hours)	**Maintenance every (hours)**
NORMAL USE (Restaurants, etc.)	LIGHT	<7 H	2000	6
	STANDARD	7-12 H	3000	8

Frequency of Maintenance Work and Rate of Use per Day				
Type of Use (Customer Information)	**Hours of Day Use**		**Setting the installation parameters (to be entered in the Installation parameters)**	
			Maintenance every (hours)	**Maintenance every (hours)**
	INTENSIVE	12-17 H	3000	16
	VERY INTENSIVE	17-24 H	3000	24
COOKING >428°F and/or COOKING FATTY PRODUCTS (e.g. chicken rotisserie)	STANDARD	<7 H	3000	8
	INTENSIVE	7-12 H	3000	16
	VERY INTENSIVE	12-17 H	3000	24
		17-24 H		

Access Installer Parameters Menu

1. Select **SETTINGS** on the **HOME** page.

Fig. 164

2. Select **INSTALLER** on the **PARAMETERS** page and enter PIN CODES **(Level 5 or 7)** to access installer.

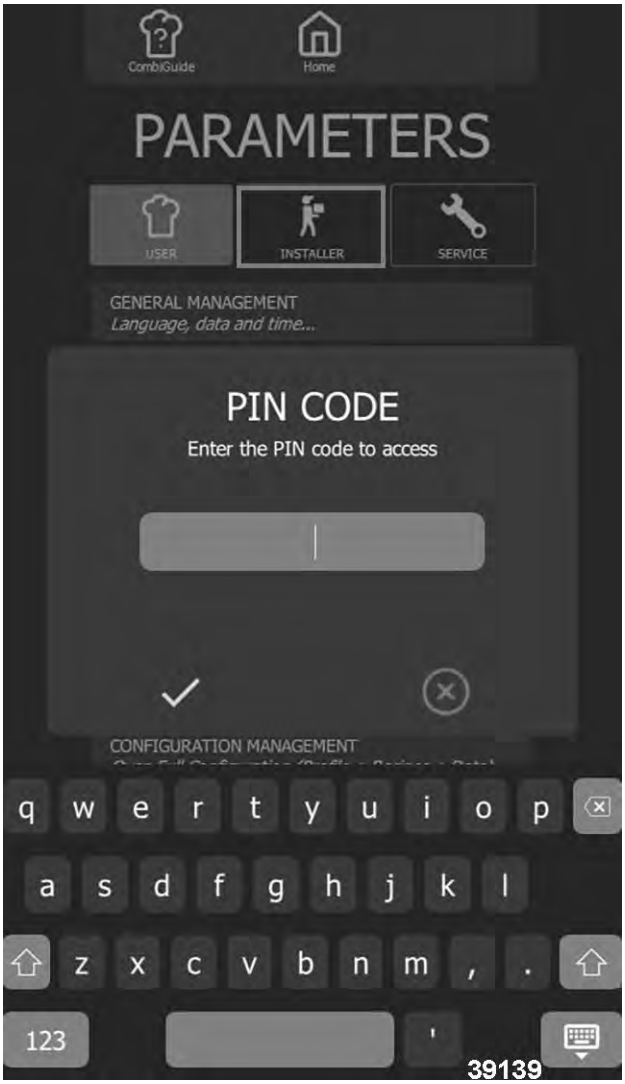


Fig. 165

3. Confirm by pressing "□ " icon.
4. Select number of days input box. Screen will display a keypad.
5. Enter number of hours before next maintenance.

   NOTE: Setting is adjustable from 100 to 7000 hours. (default is 800 Hours) Important to have appliance serviced at least once a year.
6. Select value to be modified.
7. Set value using encoder knob or keypad.
8. Press "□ " icon to confirm.
9. Select number of hours of use per day input box. Screen will display a keypad.

   NOTE: Enter average hours appliance is in use each day. This can be adjusted from 0 to 24 hours.
10. Select area of value to be modified.
11. Set value using encoder knob or keypad.
12. Press "□ " icon to confirm.

Resetting the Counter

1. Reset counter.

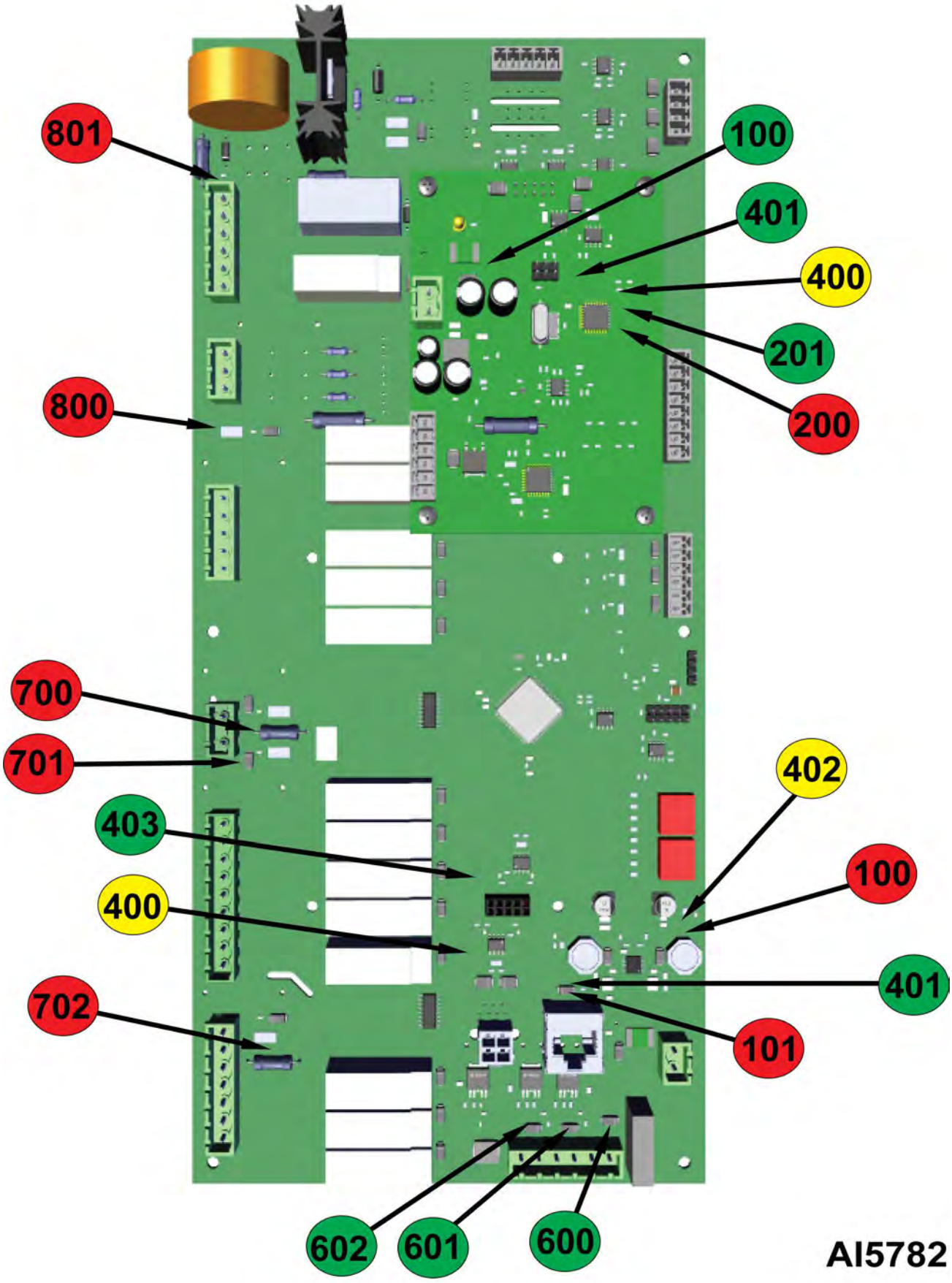
2. Press **"□ "** icon to confirm.

   NOTE: If time remaining before maintenance is equal to or less than 0, Error i84 will appear.

6. ELECTRIC OPERATION

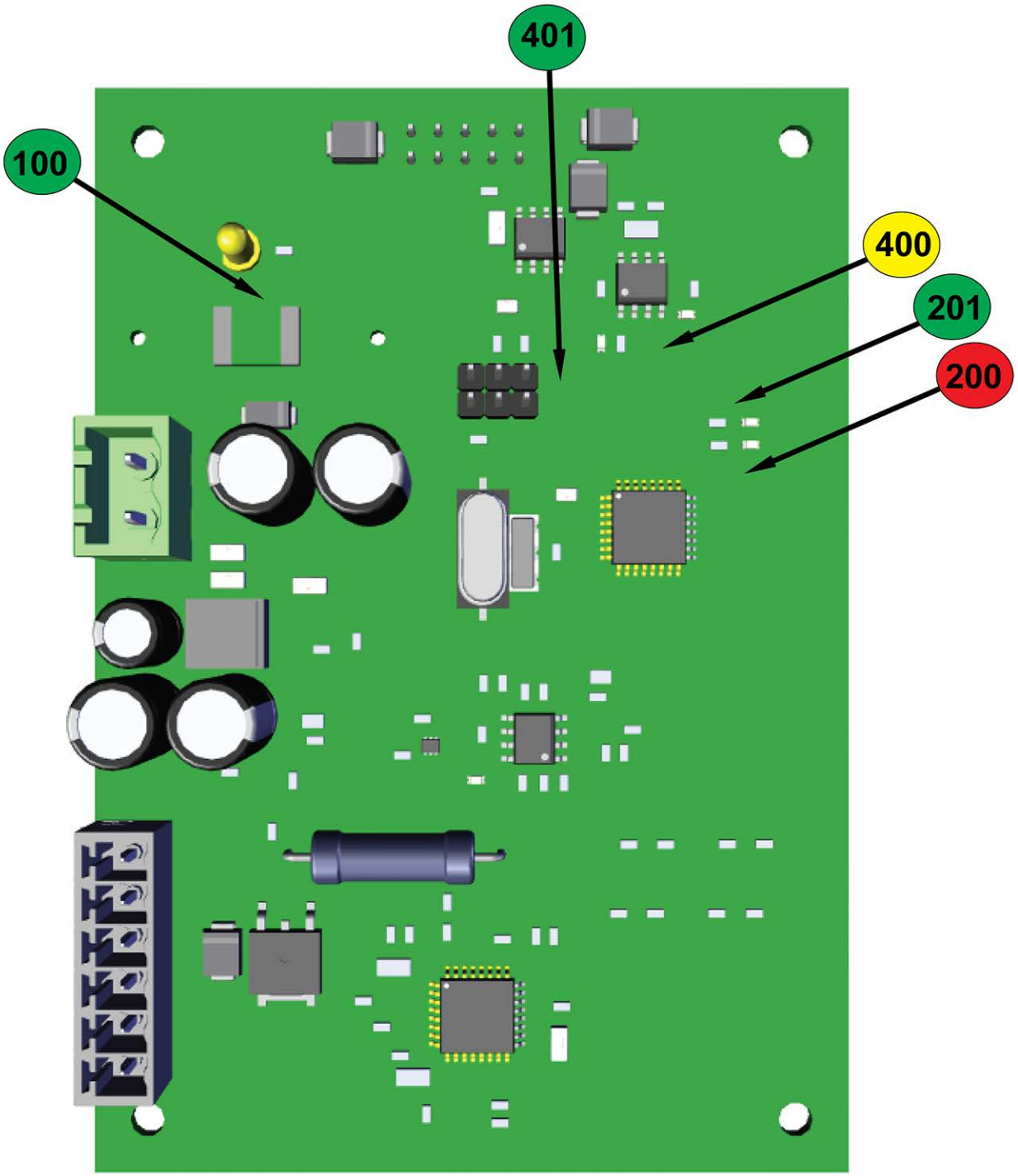
BOARD LEDS

LEGEND	
LED	**DESCRIPTION**
 **Green**	Receiving
 **Red**	Power ON
 **Yellow**	Transmitting
 **Grey**	LED Off



MAIN BOARD, HUMIDITY BOARD

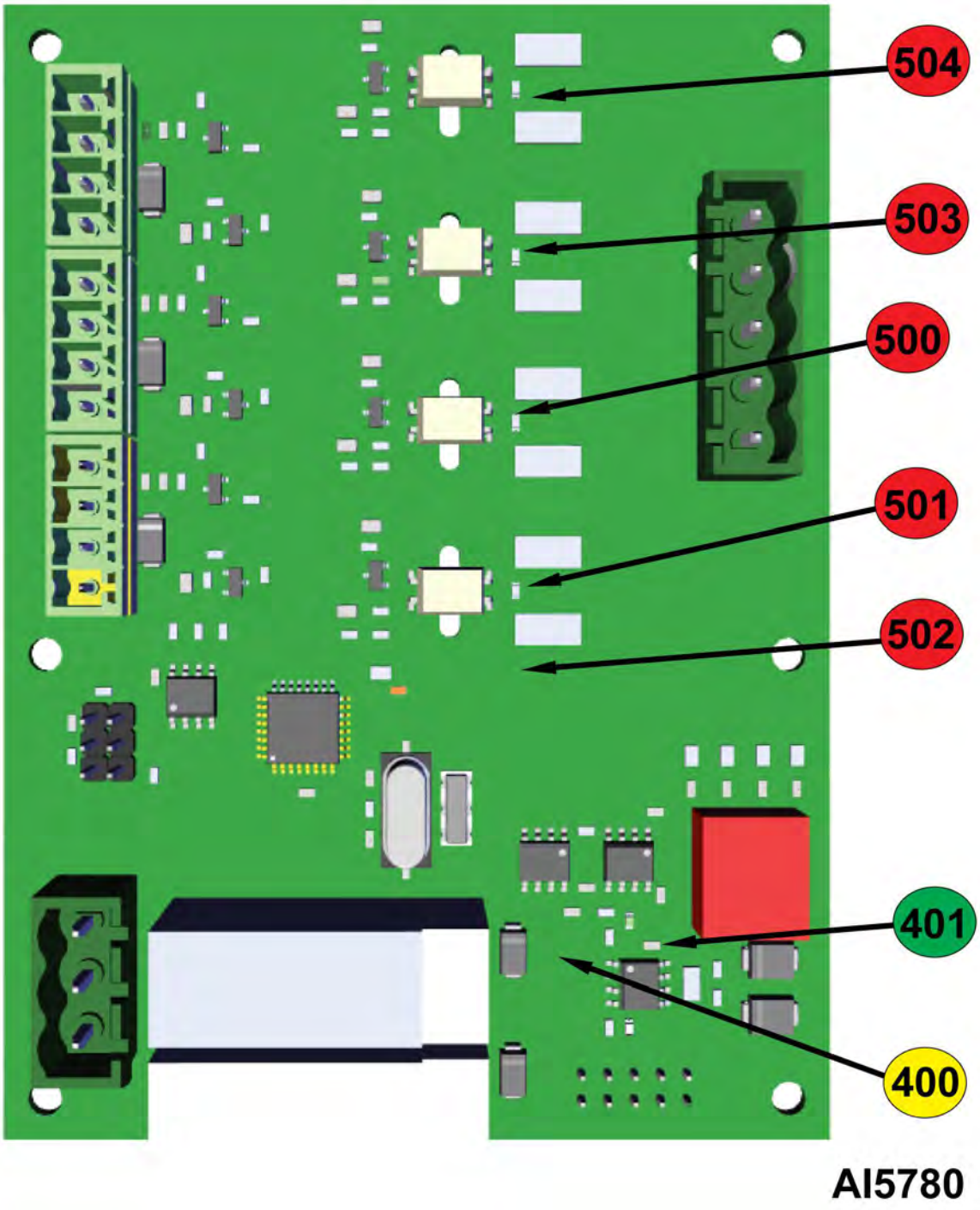
MAIN BOARD			
LED	**Color**	**Status**	**Designation**
100	Green	On - Permanent	3.3 Volt voltage present.
101	Red	On - Permanent	5 Volt voltage present.
400	Yellow	Flashing	Tx signals RS485 communication.
401	Green	Flashing	Tx signals RS485 communication.
402	Yellow	Flashing	Tx signals RS485 communication.
403	Green	On - Permanent	Tx signals RS485 communication.
600	Green	On - Permanent	Outlet S1 switched on.
601	Green	On - Permanent	Outlet S1 switched on.
602	Green	On - Permanent	Outlet S1 switched on.
700	Red	On - Permanent	Fuse F2 OK.
701	Red	On - Permanent	Fuse F3 OK.
702	Red	On - Permanent	Fuse F4 OK.
800	Red	On - Permanent	Fuse F1 OK.
801	Red	On - Permanent	Lighting if active Kp. Fuse Fm OK.



HUMIDITY BOARD

HUMIDITY (Ahu) BOARD			
LED	**Color**	**Status**	**Designation**
100	Green	On - Permanent	Fuse F1 OK.

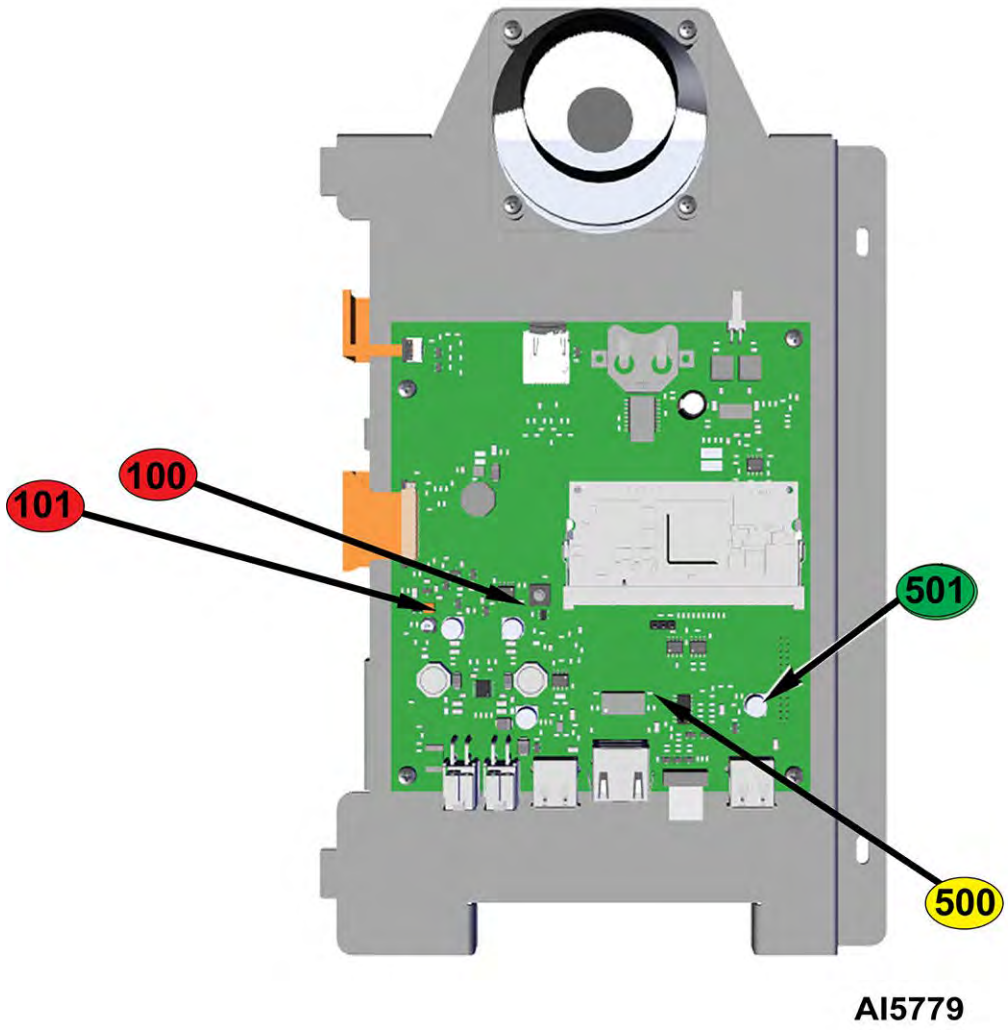
HUMIDITY (Ahu) BOARD			
LED	**Color**	**Status**	**Designation**
200	Red	Flashing then Off	Indicates incorrect operation of the humidity probe.
201	Green	Flashing then Permanent	Indicates correct operation of the humidity probe.
400	Yellow	Flashing	RS485 communication Tx signals - Transmit.
401	Green	Flashing	RS485 communication Tx signals - Transmit.



GAS BOARD

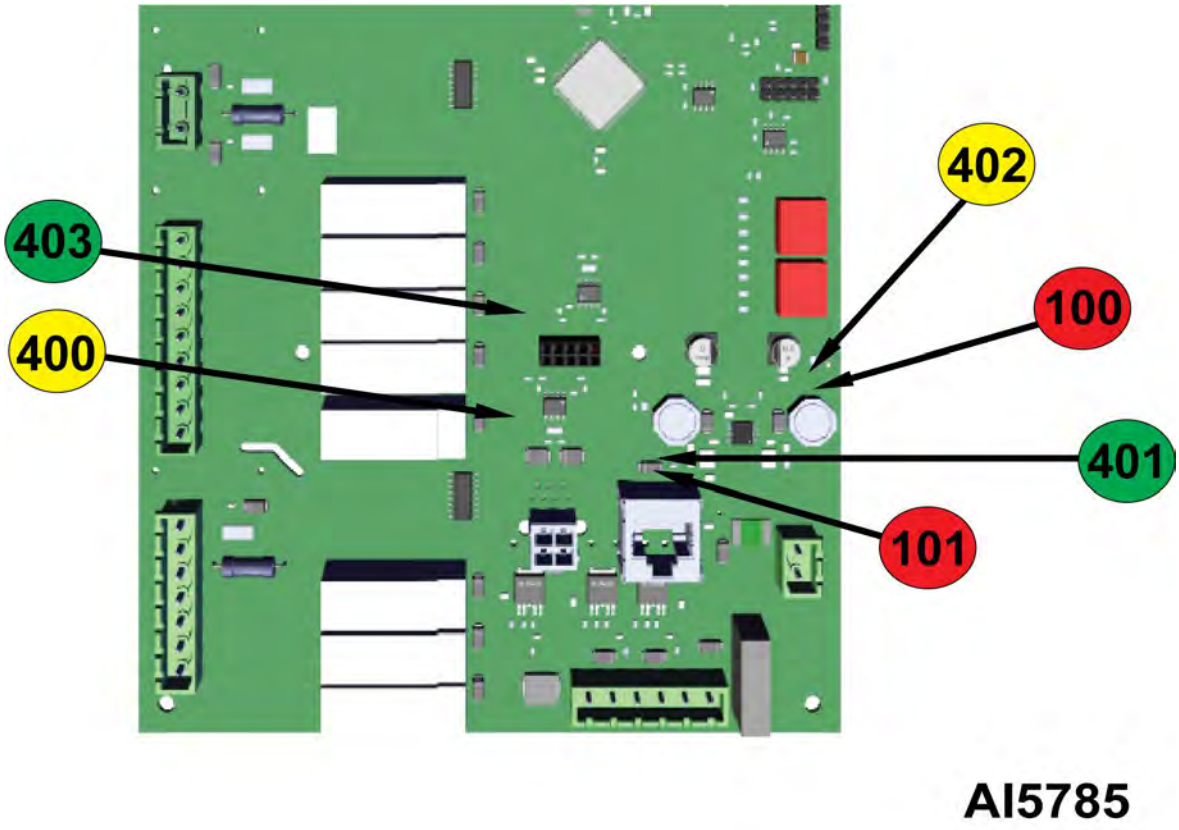
GAS (Aag) BOARD			
LED	**COLOR**	**STATUS**	**DESIGNATION**
400	Yellow	Flashing	Tx signals RS485 communication.
401	Green	Flashing	Tx signals RS485 communication.
500	Red	Permanent	Presence of gas in the gas steam generator burner.

GAS (Aag) BOARD			
LED	**COLOR**	**STATUS**	**DESIGNATION**
501	Red	Permanent	Presence of gas in dryer burner 2 (on certain models only).
502	Red	Permanent	Presence of gas in dryer burner 1.
503	Red	Permanent	Gas safety fault - steam generator burner.
504	Red	Permanent	Gas safety fault - dry heat burner.



INTERFACE BOARD

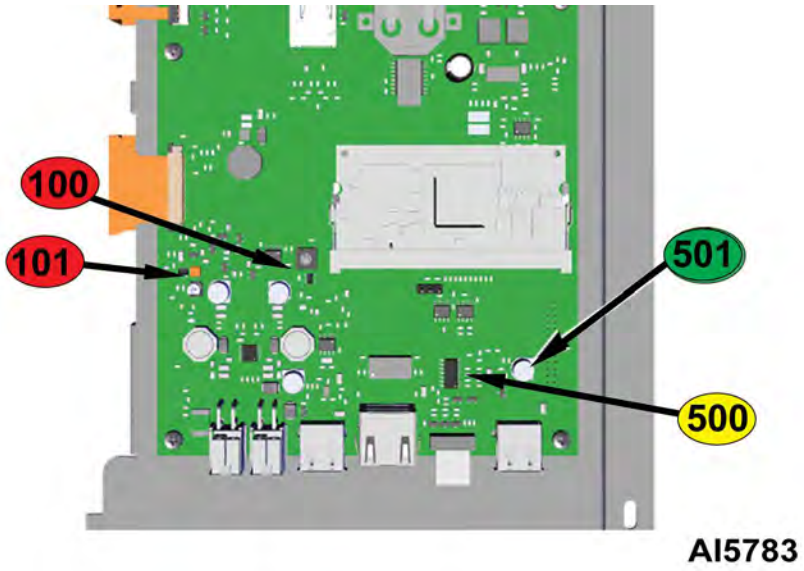
INTERFACE BOARD			
LED	**COLOR**	**STATUS**	**DESIGNATION**
100	Red	On Permanent	3.3 Volt voltage present.
101	Red	On Permanent	5 Volt voltage present.
500	Yellow	On Permanent	Tx signals RS485 communication.
501	Green	On Permanent	Tx signals RS485 communication.



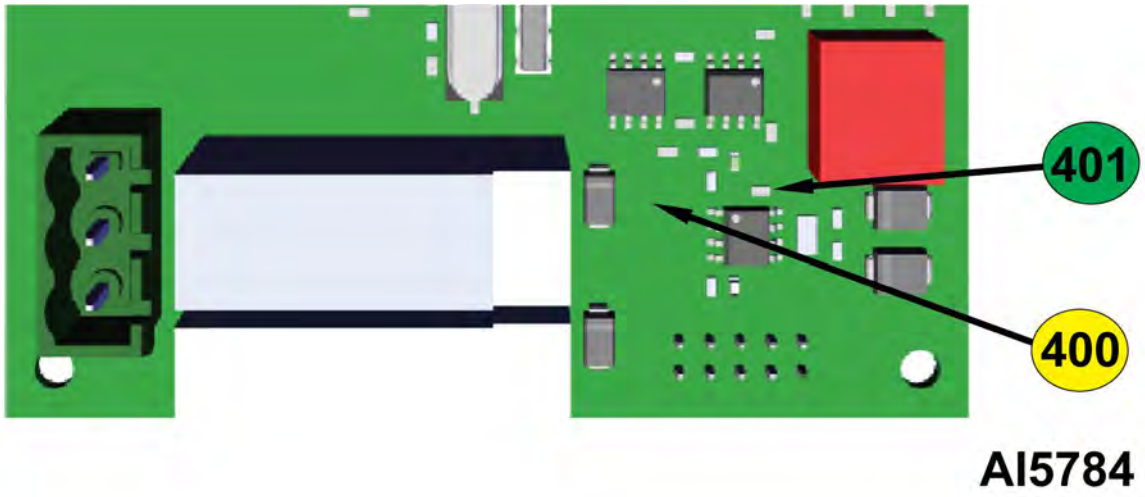
COMMUNICATION LEDS MAIN BOARD

(Ai) Interface Board (Fig. 175)				(Aa) Main Board (Fig. 174)				Diagnostics	Solutions
101	100	500	501	400	401	101	100		
RED	RED	YELLOW	GREEN	YELLOW	GREEN	RED	RED	Interface and Main (Aa and Ai) board - OK.	Functioning normally.
GREY	GREY	GREY	GREY	GREY	GREY	GREY	GREY	Power supply failure.	Check for 24 VDC at J18 terminals.
GREY	GREY	GREY	GREY	GREY	GREY	RED	RED	Connection problem with Ai board.	Replace the interconnecting cable between Main Board (Aa) and Interface (Ai) board, and/or Interface (Ai) board.
RED	RED	YELLOW	GREY	GREY	GREEN	RED	RED	Main (Aa) board - Out of order.	Replace Main board.
RED	RED	GREY	GREY	GREY	GREY	RED	RED	Main (Aa) board - Out of order.	Replace Main board.

(Ai) Interface Board (Fig. 175)				(Aa) Main Board (Fig. 174)				Diagnostics	Solutions
RED	RED	YELLOW	GREY	GREY	GREY	RED	RED	Interconnecting Cable between Interface (Ai) board and Main (Aa) assembly faulty.	Replace interconnecting cable.

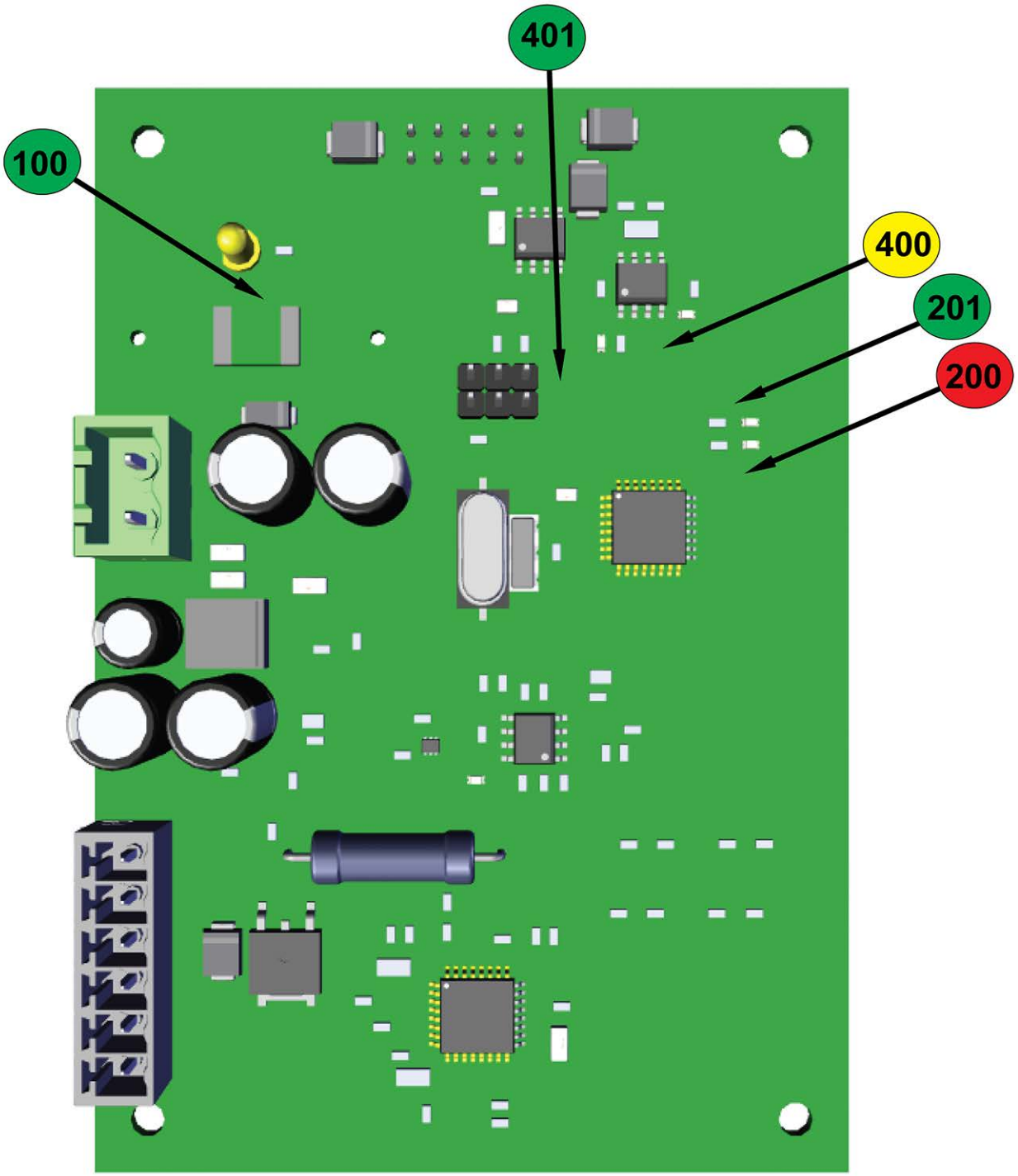


INTERFACE BOARD



COMMUNICATION LEDs GAS BOARD

Gas Board (Aag)		Diagnostics	Solutions
400	401		
YELLOW	GREEN	Gas (Aag) board - OK	Functioning Normally
GREY	GREEN	Gas (Aag) board - Out of Order	Replace Board



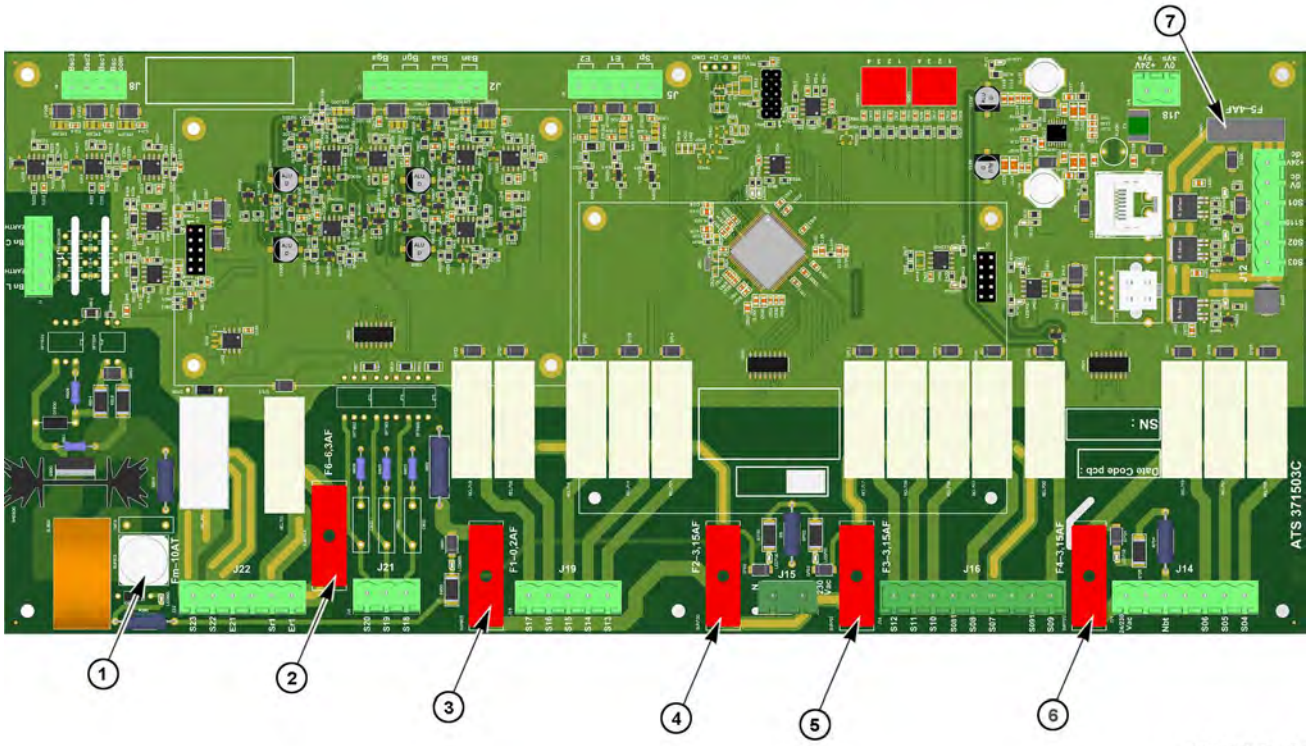
COMMUNICATION LEDs HUMIDITY BOARD

Humidity Board (Ahu)		Diagnostics	Solutions
401	400		
GREEN	YELLOW	Humidity Board (Ahu) Board - OK	Functioning Normally

GREEN	GREY	Humidity Board (Ahu) - Out of Order	Replace Board

Humidity Board (Ahu)		Diagnostics	Solutions
201	200		
GREY	GREY	Standby	
GREEN	RED	Initialization.	Flashes - Start-up or wake-up from standby.
GREEN	RED	Start-up calibration.	Alternating flashes.
GREEN	GREY	Initial heating ramp on heater.	Blinking proportional to heating percentage.
GREEN	GREY	Heater temperature within control range.	Normal functioning.
GREY	RED	Heater overheating.	Flashing.
GREY	RED	Other errors.	- Ar communication error. - CJ125 calibration error - Supply voltage too low. - Humidity probe missing or incorrectly connected. - Heater probe current zero.

BOARD CONNECTOR / FUSE LOCATIONS



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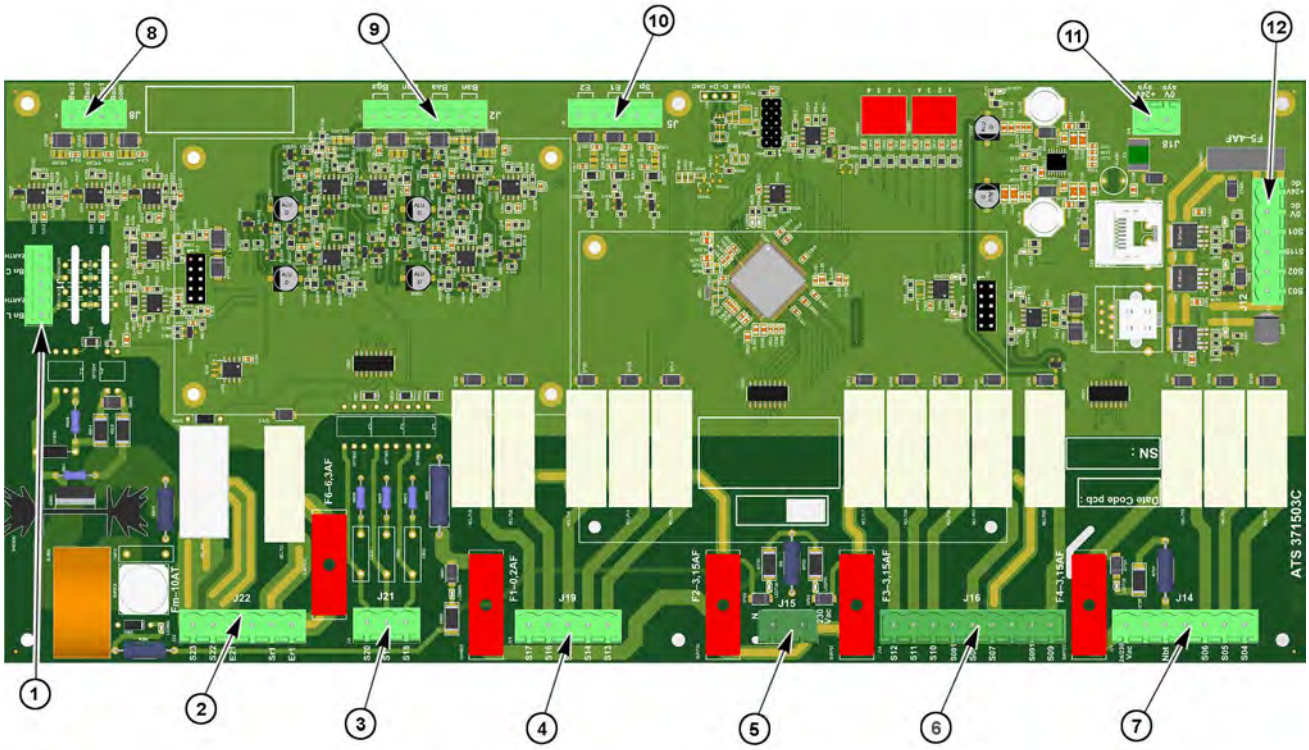
MAIN BOARD - FUSES

MAIN BOARD FUSES					
ITEM	**FUSE**	**ELECTRICAL CALLOUT**	**COMPONENT**	**CALIBER**	**SIZE**
1	Fm	Fm	Ventilation motor protection.	10A Time-delay	5X20
3	F1	F1	Solenoid valve protection.	0,2A Fast	5X20
4	F2	F2	Wash pump solenoid valve protection.	3,15A Fast	5X20
5	F3	F3	Protection of Heating, technical ventilation and gas board power supply.	3,15A Fast	5X20
6	F4	F4	Pump protection.	3,15A Fast	5X20
7	F5	F5	24Vdc service protection.	4A Fast	ATC
2	F6	F6	Potential-free contact protection (hood).	6,3A Fast	5X20



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MAIN BOARD

ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
1	J1	2	Orange	BnL	Checks water level in steam generator.	-
		5	Green/ Yellow	Earth		
		3	NC	-		

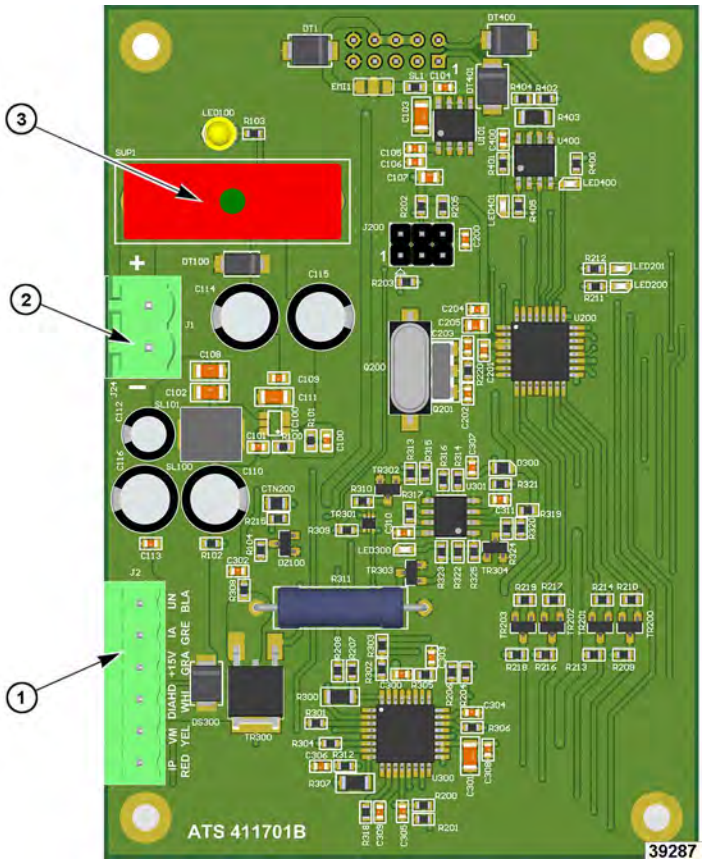
ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		4	Orange	BnC	Checks the water level in wash tank.	
		5	Green/ Yellow	Earth		
2	J22	1	Black	E23	Activates clockwise motor rotation.	230VAC with Xm0
		2	Red	E22	Activates anticlockwise motor rotation.	
		3	Black	E21	Supplies power to motor.	
		4	-	-	-	
		5	W1-2	Sr1	Potential-free contact for hood motor control.	Closed when the oven is operating
		6	W1-1	Er1		
3	J21	1	Pink	Yboiler-s20	Activates the injection solenoid valve.	230VAC with neutral
		2	Brown	Ycool-s19	Activates the cooling solenoid valve.	
		3	Pink	Ycond-s18	Activates the condenser solenoid valve.	
4	J19	1	Reserve	S17	Reserved	230VAC with neutral
		2	Brown	Ydescal. - S16	Activates the tablet dissolution solenoid valve.	
		3	Green	Yspray - S15	Activates the spray hose solenoid valve.	
		4	Brown	S14	Activate the motor Air inlet contactor (20 levels ovens only).	
		5	Purple	Wash pump- S13	Activates the wash pump.	
5	J15	1	Blue	Neutral	Supplies the 230Vac outputs.	230VAC between these two points.
		2	Purple	230VAC		
6	J16	1	Brown	Chauf Vap-S12	In an electric oven, activate the Kg steam generator heating contactor(s).	230VAC with Neutral
			Red		In a gas oven, activates the steam generator burner.	230VAC with Neutral

ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		2	Red	Chauf 2-S11	Not used in an electric oven In a gas oven, activates the heating burner (only 20 level oven).	230VAC with Neutral
		3	Pink	Chauf 1-S10	In an electric oven, activate the Kr (green) control contactor(s).	230VAC with Neutral
			Red		In a gas oven, activate the heating burner.	
		4	Orange	S081	In a gas oven, supplies the gas solenoid valves.	230VAC with Neutral
		5	Orange	Mtv1-S08	Activates technical ventilation.	230VAC with Neutral
			Purple	Mtv1-S08	Activates technical ventilation.	230VAC with Neutral
		6	Brown	Aag 230V - S07	Not used in electric ovens Supplies the gas card of gas ovens	230VAC with Neutral
		7	-	-	-	-
		8	Purple	XeA-S091	Controls the energy saver (electric oven). Controls the second technical ventilation.	230VAC with Neutral
			W1-3		Controls the rotation speed of the hood.	
		9	Purple	S09	Activates the power contactor(s) Kp.	230VAC with Neutral
7	J14	1	Purple	24/230VAC	Supplies 120VAC pump.	120VAC with Nbt (Narrow Bandwidth Technology)
		2	-			
		3	Blue	Nbt (Narrow Bandwidth Technology)	Common pump supply 120VAC (neutral).	120VAC with 24/230VAC
		4	-			
		5	Purple	Mdg - S06	Activates descaling pump 120VAC.	120VAC with Nbt (Narrow Bandwidth Technology)
		6	Brown	Mvm - S05	Activates 120VAC cavity drain pump.	120VAC with Nbt (Narrow Bandwidth Technology)

ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		7	Pink	Mvg - S04	Supplies 230VAC outputs.	120VAC with Nbt (Narrow Bandwidth Technology)
8	J8	1	Black	PT100Bsc3	Food temperature control (3 levels).	• Value between 100 Ohms (35°F) and 212 Ohms (572°F). • Check these values between yellow wire and each other wire.
		2	Red	PT100Bsc2		
		3	White	PT100Bsc1		
		4	Yellow	Bsc com.		
9	J2	1	Red	Bga	Measures steam generator temperature (safety input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F).
		2	Red	Bga		
		3	White	Bgn	Measures steam generator temperature (control input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F).
		4	White	Bgn		
		5	Red	Baa	Measures cavity temperature (safety input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F).
		6	Red	Baa		
		7	White	Ban	Measures ambient temperature in cavity (control input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F).
		8	White	Ban		
10	J5	1		E2	Grease collection pressure switch option.	
		2		E2		
		3	Brown	E1	Control the closing of the door.	Normally Closed Contact.
		4	Blue	E1		
		5	Brown	Sp		
		6	Blue	Sp		
11	J18	1	Black	+24VSyst	24VDC power supply for Main board.	24VDC between 1 and 2.
		2	Red	0VSyst		
12	J12	1	Red	S03	Supplies pump for the grease collection option.	24VDC with EC-.
		2	Red	S02	Supplies In valve or In valve contactor (20-level ovens only).	

ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
			Red	S110	Supplies power to LED lightning on oven door (20-level ovens only).	
		4	Red	S01	Supplies power to the LED lightning on the oven door.	
		5	Black	0VDC	Not connected.	
		6	Red	24 VDC	External power supply 24Vd.c. from Tc+.	120VAC with Nbt (Narrow Bandwidth Technology).

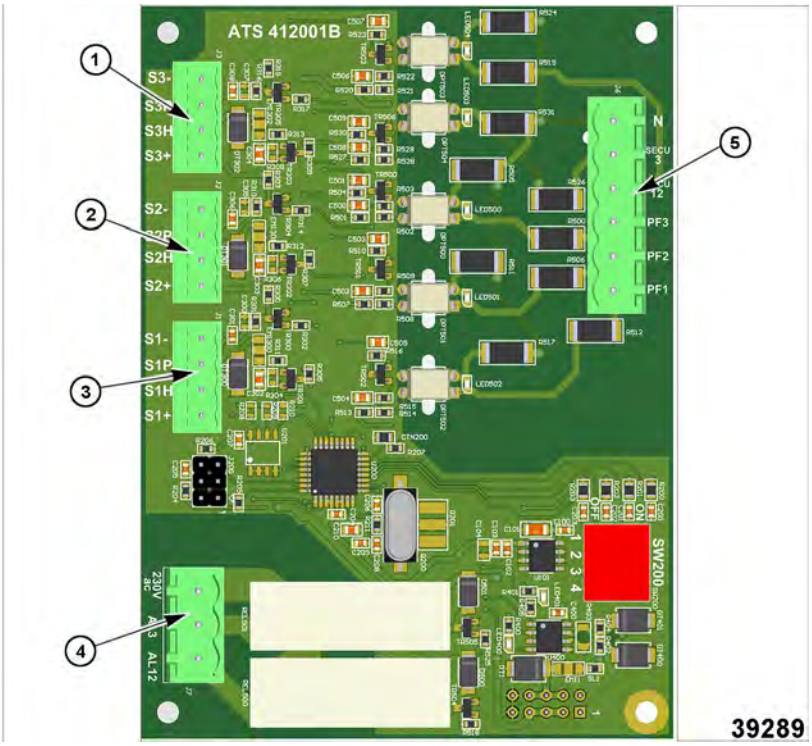
1



HUMIDITY BOARD

HUMIDITY BOARD FUSE				
FUSE	**REFERENCE**	**FUNCTION**	**CALIBER**	**SIZE**
F2	F2	Protect humidity board.	2A Fast	5x20

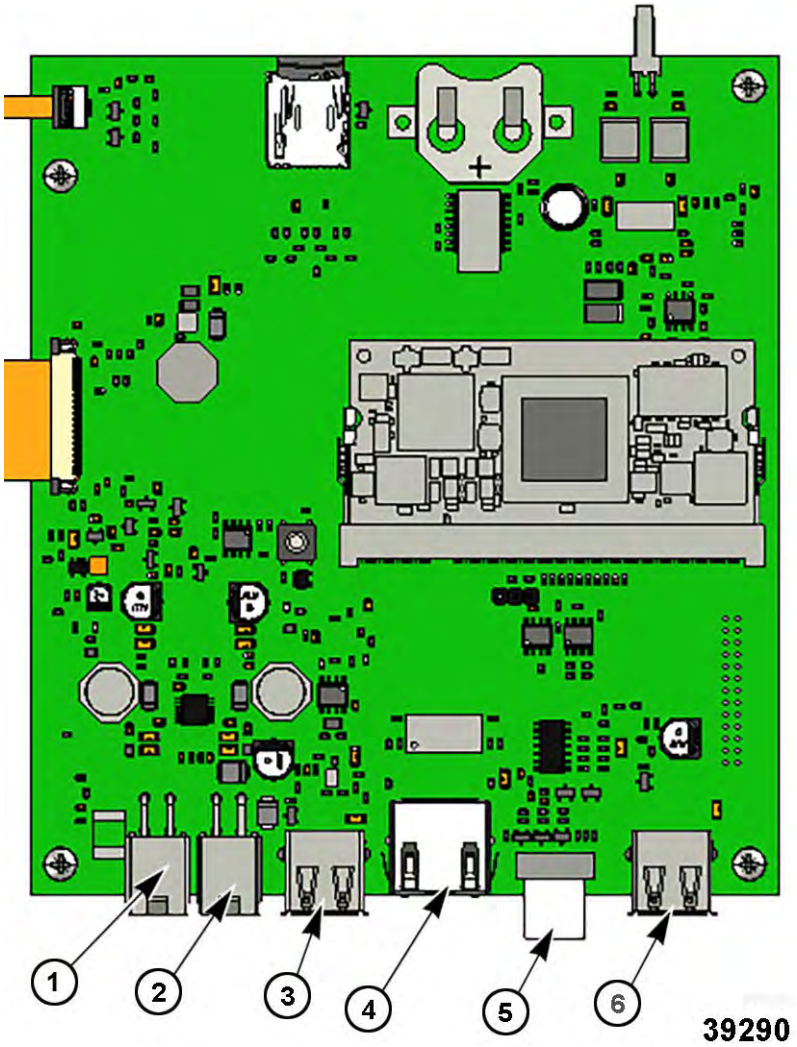
ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
1	J2	1	Red	Ah Red	Check humidity level.	
		2	Orange	Ah Yel		
		3	White	Ah Whi		
		4	Grey	Ah Gre		
		5	Purple	Ah Pur		
		6	Black	Aj Blk		
2	J1	1	Black	Ahu/-	Moisture card power supply.	24 VDC between these two points.
		2	Red	Ahu/+		



GAS BOARD

ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
1	J3	1	Black	GND/Alim-PWM	Steam generator burner fan control.	
		2	Pink	S1P/PWM input		
		3	Orange	S1H/PWM Hall probe output		
		4	Red	+24Vdc/Alim +PWM		

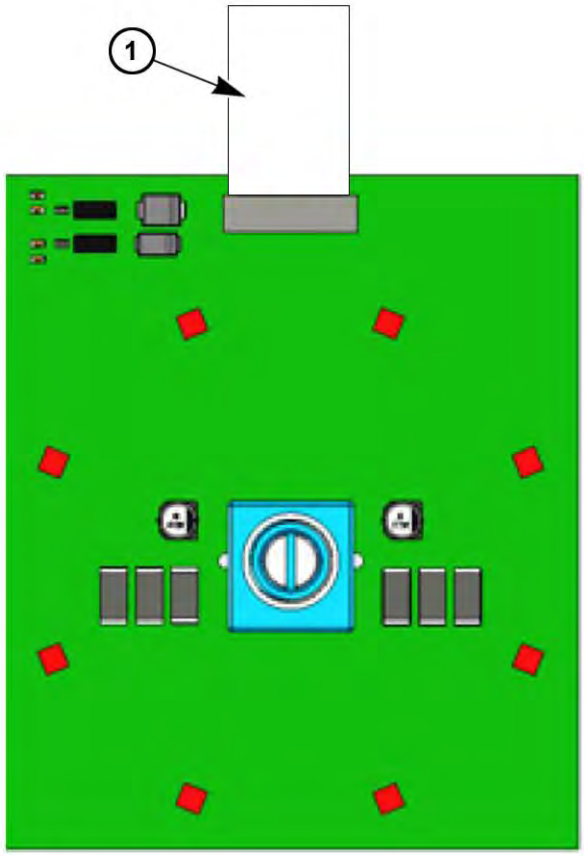
ITEM	CONNECTOR	TERMINAL POSITION	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
2	J2	1	Black	GND/Alim-PWM	Dry heat burner fan control (only on 20 levels).	
		2	Pink	S2P/PWM input		
		3	Orange	S2H/PWM Hall probe output		
		4	Red	+24Vdc/Alim +PWM		
3	J1	1	Black	GND/Alim-PWM		
		2	Pink	S1P/PWM input	Dry heat burner fan control.	
		3	Orange	S1H/PWM Hall probe output		
		4	Red	S1H/PWM Hall probe output 4 Red +24Vdc/ Alim+PWM		
4	J7	1	Brown	230VAC	Burner ignition control.	230Va.c. between 230Va.c. and Xb.
		2	Purple	Alum ½		
		3	Brown	Al 3		
5	J6	1	Purple	Pf1	Flame and safety burner check.	Flame control feedback at 4 Red Secu 12 230VAC.
		2	Purple	Pf2		
		3	Brown	Pf3		
		4	Red	Secu 12		
		5	Grey	Secu 3		
		6	Blue	Neutral		



INTERFACE BOARD

ITEM	CONNECTOR	CONNECTOR TYPE	DESTINATION ELEMENT FUNCTION
1	J1	4-pin Molex Connector	Not used.
2	J2	4-pin Molex Connector	Connects to main board.
3	J3	USB	Connects the WIFI Dongle (Kit)
4	J4	RJ45	Ensures customer network connection for connectivity.
5	J5	10-way Ribbon Connector 1.27mm pitch AWG28	Connects coder board to interface board.
6	J6	USB	Connects front USB socket.

6



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CODER BOARD

ITEM	CONNECTOR TYPE	DESTINATION ELEMENT FUNCTION
1	10-way Ribbon Connector 1.27mm pitch AWG28	Connects coder board to interface board.

COMPONENT REFERENCE ABBREVIATIONS

ELECTRICAL CALLOUT	COMPONENT
Aag	Gas Board
Ac	Encoder Board
Ahu	Humidity Board
Ai	Interface Board
Ar	Main Board
Avg.Avr1	Gas Solenoid Valves Control Board
Ba	Ambient Probe
Bg	Steam Generator Temperature Board
Bnc	Steam Generator Level Probe

ELECTRICAL CALLOUT	COMPONENT
Bnl	Cleaning Box Level Probe
Bsc	Core Probe
Cpn	Cleaning Motor Condensator
Cm	Cavity Motor Condensator
Eag	Steam Generator Gas Spark Box, prim:230VAC 0,3A /sec 1x15kV
Ear	Dry Heat Gas Spark Box, prim:230VAC 0,3A /sec 1x15kV
Ebr.Ebg	Arched and Straight Ignition Electrode
Ee1.Ee2	LED Strip
F1	Fuse, 0, 2 A F
F2-F3-F4	Fuse, 3,15A T
F5	Fuse, 4A T
Flamme	Flame Detection Electrode
Fm	Motor fuse, 10A T
Ftco	Fuse holder and fuse, 4A T
Ftvm	Fuse holder and fuse, 10ACC
Fvb	Fuse holder and fuse, 4A T
Kbg	Steam Generator Burner Contactor
Kbr	Dry Heat Burner Contactor
Kp	Power Contactor
La	ECM Filter
Lo	In Valve, 24VDC 8,3W
M1	Cavity Fan Motor, 6 and 10 levels GN1/1 and 6 and 10 levels GN2/1
Mbg	Steam Generator Burner Motor, 207VA
Mbr	Dry Heat Burner Motor, 207VA
Mdg	Descaling Pump Motor, 56W
Mpg	Grease Pump Motor (optional), 24VDC, 31W
Mpn	Cleaning Pump Motor, 253W
Mt1	Technical Ventilation Fan
Mt2	Technical Ventilation Fan
Mvg	Steam generator Drain Pump Motor
Shu	Humidity Probe
Sp	Closed Door Reed Switch
Ta	Power Supply, 230VAC/24VDC
Tc	Power Supply, 230VAC/24VDC Power Supply, 230VAC/24VDC, Grease Collection Option
Tco	Control Transformer, 415 VA
Tvm	Cavity Fan Motor Transformer , 6 abd 10 Levels GN1/1, and GN2/1
Wsup	Power Supply Wire, 70 inch wire with NEMA plug 5-15P single phase 120VAC
Xa+Za	Power Terminal and Filter

ELECTRICAL CALLOUT	COMPONENT
Ys.Yc	Two Way Solenoid Valve
Ytd.Yg.Yi	Three Way Solenoid Valve
Zg and Zr	Interference Suppression Blocks
Zp.Zvb.Zbg	Interference Suppressor

ELECTRIC - COMPONENT LAYOUT AND FUNCTION

Fig. 184

NOTE: ELECTRIC OVENS - FRONT

ITEM	COMPONENT	FUNCTIONS
1	Touchscreen Board (Ai)	Human machine Interface.
2	Descaling Box	Contains descaling tablets/liquid.

ITEM	COMPONENT	FUNCTIONS
3	Hand Sprayer	Cooling the cavity/Cleaning the oven.
4	USB Socket	Allows connection of a USB key for updates, back-ups, etc.
5	Cavity Blower Wheel (M1)	Ensures even heat distribution.
6	Cavity Heating Elements (Rc)	Heats the inside of the Cavity.
7	Core Probe(Bsc)	Allows the temperature of food to be taken.
8	Cavity Temp Probe (Ban) and High Limit Probe (Safety) (rtd) (Baa / Ban)	Controls oven cavity temperature (safety and regulation circuits). Value between 100 Ohms(35°F) and 212 Ohms (572°F).
Not Shown (on Door)	LED Banners (Strips) (Ecl)	(Number varies according to oven model) Illuminates the oven cavity.

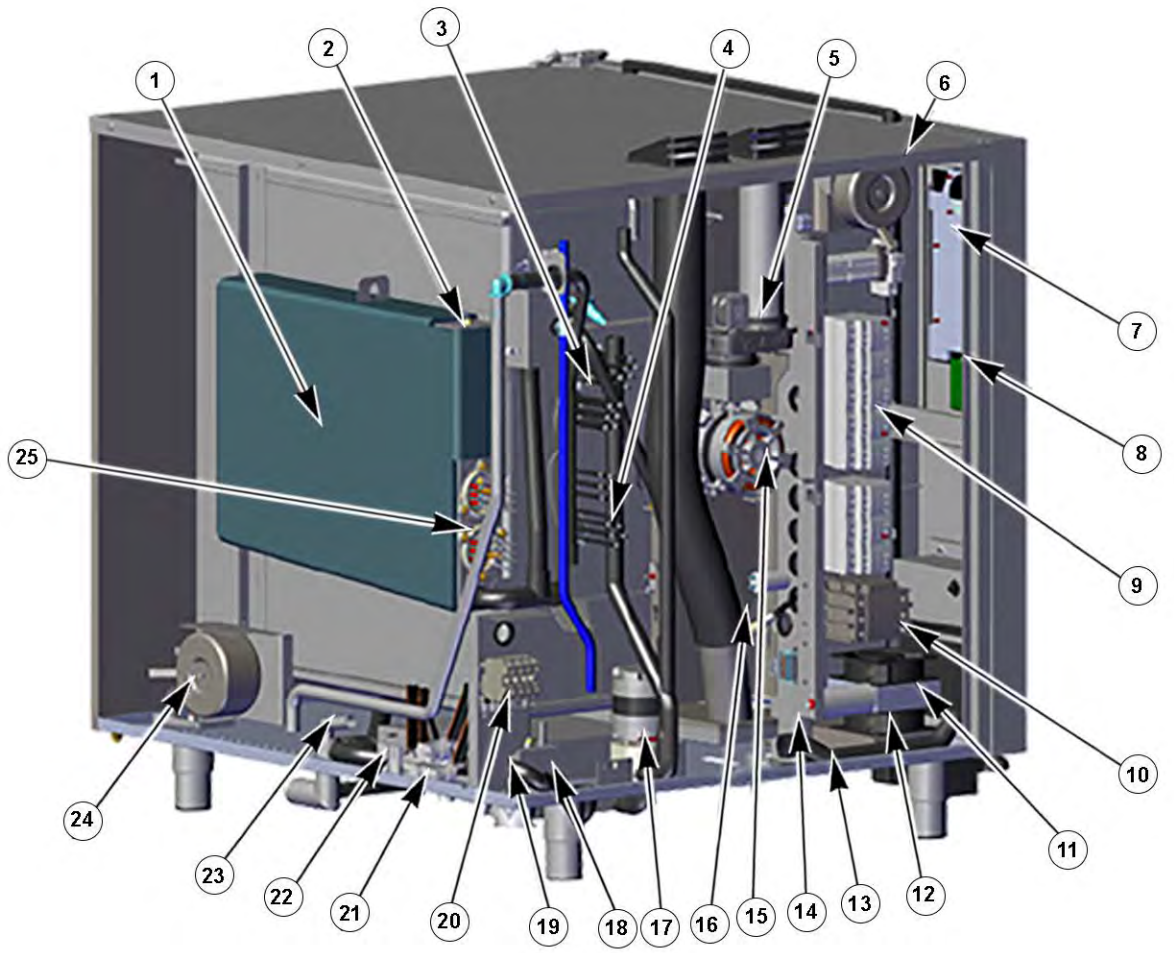


Fig. 185

NOTE: ELECTRIC OVENS - SIDE AND BACK

ITEM	COMPONENT	FUNCTION
1	Steam Generator	Heats water to turn it into steam.
2	Steam Generator Water Level Probe (Bnc)	Checks that the water level in the steam generator is correct. Acceptable reading: 100 K ohms.
4	Cavity Heating Elements (Rc)	Heats the inside of the Cavity (several depending on the model).
5	Vent Solenoid (Lo)	Controls the movement of the air inlet damper. Acceptable reading: 72 ohms.
6	Control Transformer (Tco)	(On certain models only) Ensures that customer voltage can be matched to oven operating voltages. Acceptable reading: (6-7) 2.2 ohms, (6-8) 4.4 ohms, (1-2) 2.3 ohms, (1-3) 4 ohms, (1-4) 5 ohms and (1-10) 12 ohms.
7	Touchscreen Board (Ai)	Human machine Interface.
8	Encoder Card (Ac)	Human machine Interface.
9	Main Board and Electrical Circuit Board (Ar)	Controls oven components. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
10	Electrical Board	Provides the link between the commands on the Main board and the functions of external components. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
11	Descaling Box	Descaling chemicals are added to box for descaling steam generator. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
12	Cooling Fan (Mvt1-2)	Ensures forced ventilation of the control panel.
13	Spray Hose Reel	For storing the shower hose. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
14	Pump for Descaling Steam Generator (Mdg)	Descales the steam generator. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
15	Cavity Fan Motor (M1	Ensures even heat distribution.
16	Humidity Sensor (Shu)	Humidity control. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
17	Washing Pump (Mpn)	Ensures water circulation during washing phases. Acceptable reading: 15 ohms.
18	Cavity Drain Pump (Mvm)	Ensures that the liquids contained in the Cavity are drained off. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
19	Washing / Sump box Water Level Probe (Bnl)	Checks the water level in the wash box. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.

ITEM	COMPONENT	FUNCTION
20	Power Connection Terminal Block (Xp)	Ensures customer connection to the oven.
21	Triple Solenoid Valve (filter) (Ytd- Yr - Yi)	Controls the supply of softened water dissolving tablet, cooling and steam generator filling. Acceptable reading: 4,000 ohms.
22	Double Solenoid Valve (unfiltered) (Ys - Yc)	Controls city water supply for spray hose and condenser. Acceptable reading: 4,000 ohms.
23	Wash/Sump Box	Collects the liquid elements contained in the Cavity.
24	Cavity Fan Motor Transformer (Tmv)	(Depending models) Adapts the customer voltage to the voltage used by the Cavity fan motor. Acceptable reading: (1-2) 1 ohm, (1-3) 2.7 ohms, (1-4) 1.6 ohms, (1-7) 4.2 ohms and (5-6) 1.6 ohms.
25	Steam Generator Heating Element (Rg)	Heats the water in the steam generator.

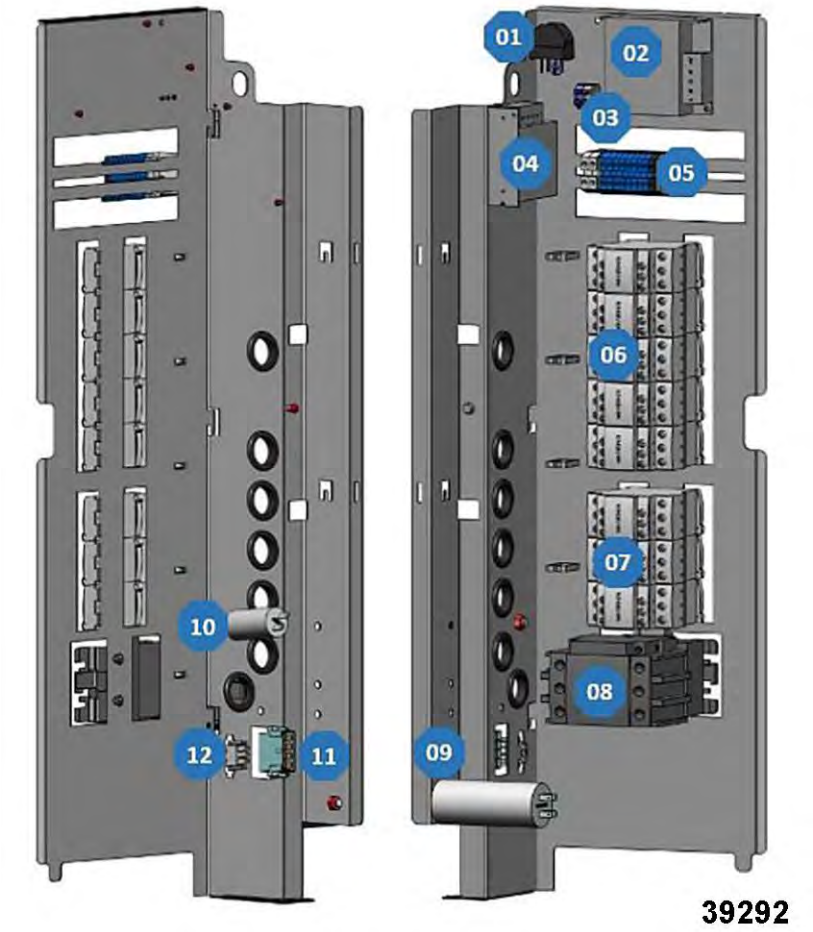


Fig. 186

NOTE: ELECTRIC OVENS - ELECTRONICS

ITEM	COMPONENT	FUNCTIONS
1	EMC Filter (La)	Limits electromagnetic interference.
2	Switching Power Supply (Ta)	Supplies 24Vdc to services (lighting, In valve solenoid, grease gun).

ITEM	COMPONENT	FUNCTIONS
3	Lighting Terminal Block (Xe)	Connects LED strips for oven lighting.
4	Switching Power Supply (Tc)	Supplies 24Vdc to Main board.
5	Terminal block (Xa,Xb,X+, X-,Xm0,Xm1) (X)	Connects various power supplies.
6	Dry Heat Control Contactor (Kr)	Supplies heating elements with dry heat. Acceptable reading: 545 ohms.
7	Steam Generator Heating Contactor (Kg)	Supplies steam generator immersion heaters. Acceptable reading: 545 ohms.
8	Power Contactor (Kp)	Controls power to oven. Acceptable reading: 545 ohms.
9	Cooling Fan (Cvm)	Starts cooling fan.
10	Wash Pump Capacitor (Cpl)	Starts wash pump.
11	Fan Motor Connector (Xmv)	Connects fan motor to board.
12	Wash Pump Connector (Xpl)	Connects wash pump to board.

GAS - COMPONENT LAYOUT AND FUNCTION

Fig. 187

NOTE: GAS OVENS - FRONT

ITEM	COMPONENT	FUNCTION
1	Touchscreen Board (Ai)	Human machine Interface.
2	Descaling Box	Contains descaling tablets/liquid.
3	Hand Sprayer	Cooling the cavity/Cleaning the oven.

ITEM	COMPONENT	FUNCTION
4	USB Socket	Allows connection of a USB key for updates, back-ups, etc.
5	Cavity Heat Exchanger	Heats the inside of oven.
6	Cavity Fan (M1)	Ensures even heat distribution.
7	Core Probe (Bsc)	Allows the temperature of food to be taken.
8	Cavity Probe (Baa/Ban)	Controls temperature in oven cavity (safety and regulation circuit). Acceptable reading 100 Ohms (35°F) and 212 Ohms (572°F).
Grease Collection Option **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.		
5	Grease Pump	Drain grease from the cavity.
6	Pressure Switch (P)	Check no over pressure in the circuit.
Not Shown (on Door)	LED Banners (Strips) (Ecl)	(Number varies according to oven model) Illuminates the oven cavity.

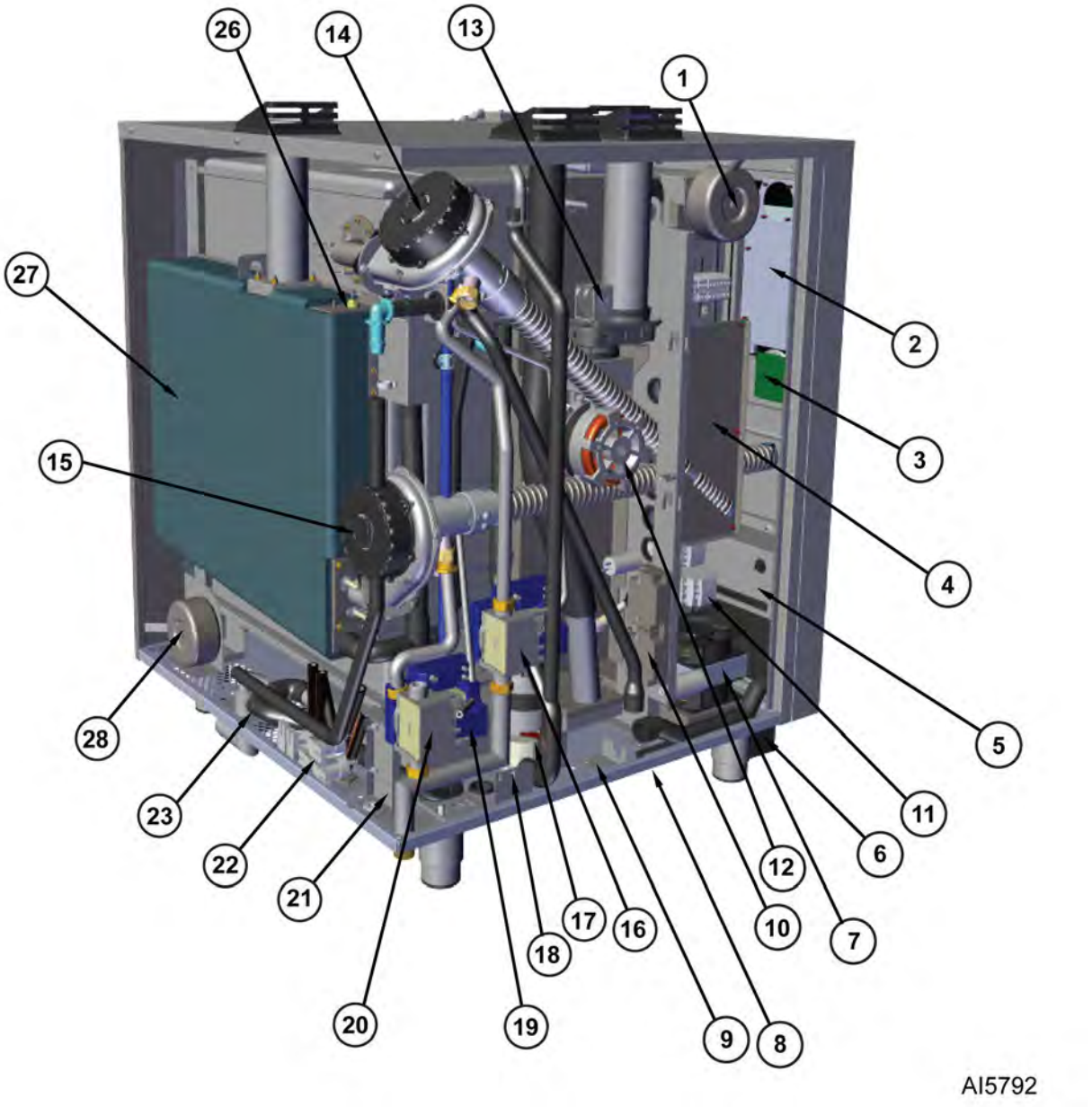


Fig. 188

NOTE: GAS OVENS - SIDE AND BACK

ITEM	COMPONENT	FUNCTIONS
1	Control Transformer (Tco)	(On certain models only) Ensures that customer voltage can be matched to oven operating voltages. Acceptable reading: (6-7) 2.2 ohms, (6-8) 4.4 ohms, (1-2) 2.3 ohms, (1-3) 4 ohms, (1-4) 5 ohms and (1-10) 12 ohms.

ITEM	COMPONENT	FUNCTIONS
2	Touchscreen Board (Ai)	Human machine Interface.
3	Encoder Card (Ac)	Human machine Interface.
4	Main Board and Humidity Board (Ar)	Controls oven components.
5	Electrical Board	Contains descaling tablets or liquid.
6	USB key connection box	Allows a USB key to be connected for updates.
7	Cooling Fan (Mt1 and Mt2)	Ensures forced ventilation for control panel.
8	Spray Hose Reel	Contains spray hose supply hose. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
9	Pump for Descaling Steam Generator (Mdg)	Descales steam generator. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
10	Humidity Sensor (Shu)	Humidity control. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
11	Electrical Board	Provides link between commands on Main board and the functions of external components.
12	Cavity Fan Motor (M1)	Ensures even cooking distribution.
13	Vent Solenoid (Lo)	Controls movement of the air inlet damper. Acceptable reading: 72 ohms.
14	Cavity Burner Blower Motor (Mbr)	Supplies oxygen to the flame.
15	Steam Generator Burner Blower Motor (Mbg)	Supplies oxygen to the flame.
16	Cavity Gas Valve (Apr-1)	Controls gas supply to dry heat burner. Acceptable reading: (EV1) 620 ohms and (EV2) 4,000 ohms.
17	Washing Pump (Mpn)	Keeps oven clean. Acceptable reading: 15 ohms.
18	Drain/Sump Pump (Mvm)	Ensures liquids contained in the Cavity are drained off. Acceptable reading: 31 ohms. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
19	Washing /Sump Box Water Level Probe (Bnl)	Checks water level in wash box.
20	Steam Generator Gas Valve (Avg)	Controls gas supply to the steam generator burner.
21	Power Terminal Block (Xp)	Enables customer's power supply to be connected.
22	Triple Solenoid Valve (Ytd-Yr-Yi)	Controls supply of softened water dissolving tablet, cooling and steam generator filling. Acceptable reading: 4,000 ohms.
23	Double Solenoid Valve (Ys-Yc)	Controls city water supply for spray hose and condenser. Acceptable reading: 4,000 ohms. **NOTE:** Art shows arrow pointing to area of component. Component is not actually shown.
24	Wash Box	Collects the liquid elements contained in the Cavity.
25	Temperature Probe Steam Generator (Bga/Bgn)	Control the temperature in the steam generator (safety and regulation circuit). Acceptable reading 1,000 K ohms.

ITEM	COMPONENT	FUNCTIONS
26	Steam Generator Level Probe (Bng)	Checks water level in steam generator.
27	Steam Generator	Turns water into steam.
28	Cavity Fan Motor Transformer (Tmv)	(On certain models only) Adapts customer voltage to the voltage used by Cavity fan motor. Acceptable reading: (1-2) 1 ohm, (1-3) 2.7 ohms, (1-4) 1.6 ohms, (1-7) 4.2 ohms and (5-6) 1.6 ohms.

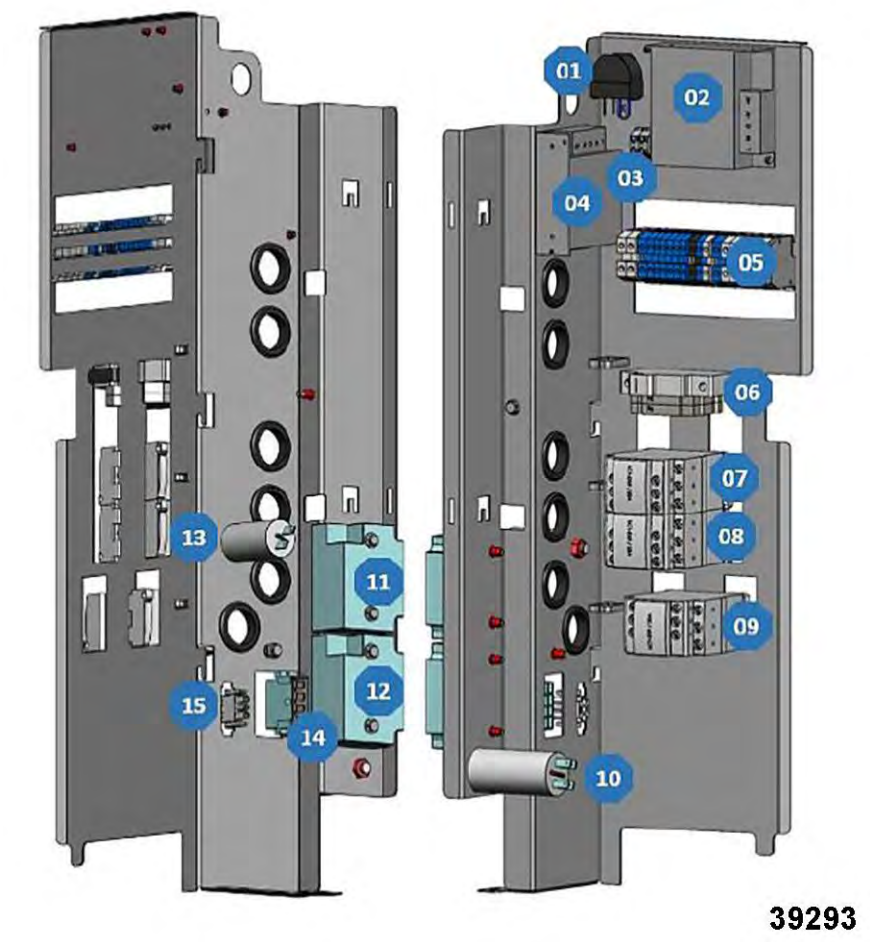


Fig. 189

NOTE: GAS - ELECTRONICS

ITEM	COMPONENT	FUNCTIONS
1	EMC Filter (La)	Limits electromagnetic interference.
2	Switching Power Supply (Ta)	Supplies 24Vdc to services (lighting, In valve solenoid, grease gun).
3	Lighting Terminal Block (Xth)	Connects LED strips for oven lighting.
4	Switching Power Supply (Tc)	Supplies 24Vdc to PLC board.
5	Terminal Block (Xa, Xb, X+, X-. XmO, Xm1) (X)	Connects various power supplies.
6	Fuses (Protections) (Ftco, Ftvb, Ftmv) (F)	Protects transformer and fan motor outputs (US model only).

ITEM	COMPONENT	FUNCTIONS
7	Dry Heat Switch (Kr)	Controls dry burner control board (1 or 2 depending on the oven model). Acceptable reading: 545 ohms.
8	Steam Generator Contactor (Kg)	Controls steam burner regulation card. Acceptable reading: 545 ohms.
9	Power Contactor (Kp)	Controls power to oven. Acceptable reading: 545 ohms.
10	Muffle Fan Capacitor (Cm)	Starts muffle ventilation motor.
11	Dryer Heat Ignition Transformer (Ear)	Light dry burner electrode (1 or 2 depending on the oven model).
12	Steam Generator Ignition Transformer (Eag)	Lights steam generator burner electrode.
13	Wash Pump Capacitor (Cpn)	Starts wash pump.
14	Fan Motor Connector (XM)	Connects fan motor to board.
15	Wash Pump Connector (Xpn)	Connects wash pump to board.

7. SEQUENCE OF OPERATION

ELECTRIC - SEQUENCE OF OPERATION

DEVICE SWITCHED ON, NOT STARTED

1. Oven connected to the mains.
    - Voltage compatible with oven.
2. Presence of voltage at terminals Xp.
    - 208/240VAC - 230VAC.-400/415VAC.-480VAC
3. Voltage present at upstream terminals of Kp (Power Contactor).
    - 208/240VAC - 230VAC-400/415VAC-480VAC
4. Voltage present at terminals Xa and Xb.
    - 230VAC regardless of input voltage.
5. Presence of voltage on switch-mode power supplies.
    - 24VDC output from Tc and Ta (Control Transformer and Switching Power Supply).
6. PLC board is powered.
    - Two voltage presence LEDs 3.3VDC and 5VAC are lit.
7. Interface board is powered.
    - Two voltage presence LEDs 3.3VDC and 5VDC are lit.
8. Humidity card is powered.
    - The fuse LED is lit and LED on the card flashes and becomes steady.
9. Fuse protection operates.
    - Fuse LEDs are lit.
10. Switching is established between the cards.
    - Flashing communication LEDs (orange and green).
11. Switching the forced ventilation relay.
    - 230VAC fan starts up and output (Main Board) Ar-S08 goes to 1.
12. Switching the lighting triac.
    - 24VDC LED strips light up Output (Main Board) Ar-S01 goes to 1 i.e. 24VDC.
13. Air inlet damper operating cycle.
    - Valve opens and closes Output (Main Board) Ar-S02 goes to 1 then 0.
14. Boiler filling solenoid valve opens.
    - If the level measured by Bng (Steam Generator Level Probe) is not reached, output Ar-S20 switches to 1 and solenoid valve Yi opens until the level is reached (230VAC).

STARTING THE OVEN

1. Press button or screen for at least 3 seconds.
2. Interface card screen lights up.
    - Loading data.
3. Screen displays a bar graph showing the progress of oven initialization.
    - Reset screen can be accessed by pressing button on the bottom center of the screen.
4. Display will show if softener filter cartridge needs replacing.
    - Customer parameter: Water Softener capacity and installation parameter: water hardness.
5. Screen displays number of days remaining before the next maintenance visit if this number is less than 10.
    - Installation parameter=Number of hours +hours per day.
6. Home screen appears.
    - Several menus are available.

COOKING IN AUTO MODE DRY COOKING

1. Press cooking button.
    - Display shows the temperature setpoint (356°F), the dry/wet zone selection, the elapsed time and the start tab.
2. Setting cooking temperature.
    - Set to 356°F by pressing the display.
3. Setting cooking time.
    - Set by rotating the encoder to 5 minutes.
4. Data validation.
    - Press the start button.
5. Oven first starts up in preheating mode.

- A red bar graph indicating the percentage of pre-watering is calculated according to the formula (actual temperature 14°F) / (set temperature*(1-2)-10) the time, temperature also appear.

6. Hood control.
   - Closing the (Main Board) Ar-Er1 Ar-Sr1 hood operation control contact.
7. Closing power contactor Kp (Power Contactor).
   - Ar-S09 output at 1 i.e. 230VAC.
8. Closing Kr (Dry Heat Switch) contactor.
   - Ar-S10 and Ar-S11 outputs set to 1 (230VAC).
9. Opening hand shower solenoid valve.
   - Ar-S15 output changes to 1 (230VAC).
10. Turbine rotation.
    - Changeover of motor relay E21-S22 (no reversal of direction of rotation in preheating mode).
11. When set temperature reaches 194°F Kr (Dry Heat Switch) contactor opens.
    - (Main Board) Ar-S10 and Ar-S11 outputs go to 0.
12. Boiler preheating if Pc28, contactor closed Kg (Steam Generator Contator).
    - (Main Board) Ar-S12 output switches to 1 (230VAC).
13. When set temperature is reached (176°F), the Kg (Steam Generator Contator) contactor opens.
    - (Main Board) Ar-S12 output goes to 0.
14. Resume dry heating until the set temperature is reached.
    - Closing of outputs (Main Board) Ar-S10 and Ar-S11 (230VAC between A1 and A2 of Kg (Steam Generator Contator)).
15. Oven stops heating when temperature is reached.
    - Opening of outputs Ar-S10 and Ar-S11 opening of Kr (Dry Heat Switch), emission of an audible signal, display of the check tab and a LOAD message.
16. Switch to cooking mode by opening door or pressing the control screen.
    - Opening and closing of the door contact (Main Board) Ar-Sp input goes from 1 to 0 then from 0 to 1, Ar-S01 output goes to 0 (LED panel off), turbine stops.
17. Starting the cooking process.
    - Cooking progress and time countdown visible from the progress bar graph (elapsed time/total time).
18. In DRY mode, humidity control is deactivated and the damper is open.
    - (Main Board) Ar- S02 goes to 1 24VDC.
19. First heat-up.
    - Outputs (Main Board) Ar-S10 and Ar-S11 are closed and then opened, as long as the ambient temperature is below the set temperature - BPC, heating remains activated.
20. Heating control.
    - When temperature exceeds the set temperature 41°F, power is reduced (except during reversal of the direction of rotation of the muffle turbine motor +10sec);
    - 3/3' regulation: 100% operating rate Kr (Dry Heat Switch) is always on, outputs (Main Board) Ar-S10 and Ar-S11 supply 230VAC.
    - 2/3 regulation: operating rate 63% stopping rate 27% Kr (Dry Heat Switch) is on 63% of the time, outputs (Main Board) Ar-S10 and Ar-S11 supply 230VAC.
    - 1/3' regulation: operating rate 36% stopping rate 54% Kr (Dry Heat Switch) is on 36% of the time, outputs (Main Board) Ar-S10 and Ar-S11 supply 230VAC.
    - When heating is reactivated, a delay of 55sec is started, this resumes at the level before stopping, if there is no heating cut-off before the end of the delay, the power will be increased.
21. Turbine rotation.
    - Motor relays E21-S22 and E21-S23 switch every 4 minutes.
22. Stop cooking.
    - One minute before the end of the elapsed time, a beep is emitted and a dialogue box appears offering several choices (continue, maintain temperature and stop).

COOKING IN AUTO MODE MIXED COOKING

1. Press cooking button.

- Display shows the temperature setpoint (356°F), the dry/wet zone selection, the elapsed time and the start tab.

2. Setting cooking temperature.
   - Set to 356°F by pressing the display.
3. Setting cooking time.
   - Set by rotating the encoder to 5 minutes.
4. Data validation.
   - Press start button.
5. Oven first starts up in preheating mode.
   - A red bar graph indicating the percentage of pre-watering is calculated according to the formula (actual temperature 14°F) / (set temperature*(1-2)-10) the time, temperature also appear.
6. Hood control.
   - Closing the (Main Board) Ar-Er1 Ar-Sr1 hood operation control contact.
7. Closing power contactor Kp (Power Contactor) .
   - (Main Board) Ar-S09 output at 1 i.e. 230VAC.
8. Closing Kr (Dry Heat Switch) contactor.
   - (Main Board) Ar-S10 and Ar-S11 outputs set to 1 (230VAC).
9. Closing In valve.
   - Output (Main Board) Ar-S02 at 0.
10. Opening hand shower solenoid valve.
    - (Main Board) Ar-S15 output changes to 1 (230VAC).
11. Turbine rotation.
    - Changeover of motor relay E21-S22 (no reversal of direction of rotation in preheating mode).
12. When set temperature reaches 90°C Kr (Dry Heat Switch) contactor opens.
13. Boiler preheating if Pc28, contactor closed Kg (Steam Generator Contactor).
    - (Main Board) Ar-S12 output switches to 1 (230VAC).
14. When the set temperature is reached (80°C), the Kg contactor opens.
    - Ar-S12 output goes to 0.
15. Humidity management.
    - Actual humidity < Set humidity-10.
16. Resume dry heating until the set temperature is reached.
    - Closing of outputs (Main Board) Ar-S10 and Ar-S11 (230VAC between A1 and A2 of Kg (Steam Generator Contactor).
17. The oven stops heating when the temperature is reached.
    - Opening of outputs (Main Board) Ar-S10 and Ar-S11 opening of Kr (Dry Heat Switch), emission of an audible signal, display of the check tab and a LOAD message.
18. Switch to cooking mode by opening the door or pressing the control screen.
    - Opening and closing of door contact (Main Board) Ar-Sp input goes from 1 to 0 then from 0 to 1, turbine stops and lighting switches off.
19. Starting the cooking process.
    - Cooking progress and time countdown visible from the bar graph (elapsed time/ total time).
20. Humidity control mode is activated.
21. Ventilation is started.
    - First one way, then the other.
22. Temperature control.
    - When dry heating is off ((Main Board) Ar-S10 Ar-S11 at 0), Humidification is activated if Actual Humidity <(Set Humidity-10%).
    - When dry heating resumes (Ar-S10 and Ar-S11 at 1), humidification is stopped immediately, regardless of its progress.
23. Cooling solenoid valve.
    - Controlled sequentially, output (Main Board) Ar-S19 switches to 1 (230VAC) for 0.5 sec and to 0 for 4 sec. This is only possible if the ambient temperature is below 250°C.
24. Stop cooking.
    - One minute before the end of the elapsed time, a beep sounds and a dialogue box appears offering several choices (continue, maintain temperature and stop).

COOKING IN AUTO MODE STEAMING

1. Press the steam button.
   - If applies, set cooking temperature and time.

2. Setting cooking temperature.
    - Set to 208.4°F by pressing display.
3. Setting cooking time.
    - Set by rotating encoder to 5 minutes.
4. Data validation.
    - Press start button.
5. Oven first starts up in preheating mode.
6. Hood control.
    - Closing the (Main Board) Ar-Er1 Ar-Sr1 hood operation control contact.
7. Closing power contactor Kp (Power Contactor).
    - (Main Board) Ar-S09 output at 1 i.e. 230VAC.
8. Contactor closing Kg (Steam Generator Contactor).
    - Ar-S12 output changes to 1 (230VAC).
9. Opening hand shower solenoid valve.
    - (Main Board) Ar-S15 output changes to 1 (230VAC).
10. Closing In valve.
    - Output Ar-S02 at 0.
11. Turbine rotation.
    - Switching of motor relay E21-S23 throughout the cycle (no reversal of ventilation direction).
12. Oven stops heating when the temperature is reached (140°F).
    - (Main Board) Ar-S12 outputs open by Kg (Steam Generator Contactor), an audible signal is emitted, the screen displays the Check tab and a LOAD message.
13. Switch to cooking mode by opening the door or pressing the control screen.
    - Opening and closing of door contact (Main Board) Ar-Sp input goes from 1 to 0 then from 0 to 1, turbine stops and lights off.
14. Start cooking process.
    - Cooking progress and time countdown visible from the bar graph (elapsed time/ total time).
15. Temperature control.
    - As long as the room temperature is below the steam control temperature 208.4 °F, the boiler is at 100%. If the room temperature is lower than the set temperature - PUs124, the boiler operates by cycle (regulation at 50% cycle time 6 sec Toff =3 sec T on = 3 sec) The Ar-S12 output is controlled for 3 sec (230VAC) Kg (Steam Generator Contactor) glued for 3 sec. the cycle always starts with an Off sequence.
16. Stop cooking.
    - One minute before the end of the elapsed time, a beep is emitted and a dialogue box appears offering several choices (continue, maintain temperature and stop).

GAS - SEQUENCE OF OPERATION

STARTING CONDITIONS

1. Oven connected to the mains.
    - Voltage compatible with the oven.
2. Oven connected to gas network.
    - The type of gas supplied is identical to the type of gas indicated on the nameplate.
3. Presence of voltage at terminals Xp (Wash Pump Connector).
    - 120 VAC - 208/240VAC- 230VAC.
4. Voltage present at the upstream terminals of Kp (Power Contactor).
    - 120 VAC - 208/240VAC- 230VAC.
5. Voltage present at terminals Xa and Xb.
    - 230VAC regardless of input voltage.
6. Presence of voltage on switch-mode power supplies.
    - 24VDC output from Tc and Ta (Switchting Power Supplies).
7. PLC board is powered.
    - The two voltage presence LEDs 3.3VDC and 5VDC are lit.
8. Interface board is powered.
    - Two voltage presence LEDs 3.3VDC and 5VDC are lit.
9. Humidity card is powered.
    - The fuse LED is lit and the LED on the card flashes and then becomes steady.
10. Gas card is powered.

- 230 VDC present at the terminals of relays (Main Board) Al-12 and Al-3 .

11. Fuse protection operates.
    - Fuse LEDs are lit.
12. Switching is established between the cards.
    -
13. Switching forced ventilation relay.
    - The 230VAC fan starts up and output (Main Board) Ar-S08 goes to 1.
14. Switching the lighting triac.
    - The 24VDC LED strips light up Output (Main Board) Ar-S01 goes to 1 i.e. 24VDC.
15. Air inlet damper operating cycle.
    - Valve opens and closes Output (Main Board) Ar-S02 goes to 1 then 0.
16. Boiler filling solenoid valve opens.
    - If the level measured by Bng (Steam Generator Level Probe) is not reached, output (Main Board) Ar-S20 switches to 1 and solenoid valve Yi opens until the level is reached (230VAC).
17. Interface card screen lights up.
    - Loading data.
18. Home screen appears.
    - Several menus are available.

STARTING THE OVEN

1. Press the button or the screen for at least 3 seconds.
2. The interface card screen lights up.
    - Loading data.
3. Screen displays a bar graph showing the progress of oven initialization.
    - Reset screen can be accessed by pressing the button in the bottom center of the screen.
4. The display will show if the softener filter cartridge needs replacing.
    - Customer parameter: Water Softener capacity and installation parameter: water hardness.
5. The screen displays the number of days remaining before the next maintenance visit if this number is less than 10.
6. Home screen appears.
    - Several menus are available.

COOKING IN AUTO MODE DRY COOKING

1. **DRY COOKING**

   Press dry cooking button.
    - If needed, set the cooking temperature and time.
2. Setting cooking temperature.
    - Set to 356°F by pressing the display.
3. Setting the cooking time.
    -
4. Data validation.
    - Press start button.
5. Oven first starts up in preheating mode.
    - A red bar graph indicating the percentage of pre-watering is calculated according to the formula (actual temperature 14°F) / (set temperature*(1-2)-10) the time, temperature also appear.
6. Hood control.
    - Closing the (Main Board) Ar-Er1 Ar-Sr1 hood operation control contact.
7. Closing the power contactor Kp (Power Contactor).
    - (Main Board) Ar-S09 output at 1 i.e. 230VAC.
    - Closing the (Dry Heat Control Contactor) Kbr 230VAC contactor between A1 and A2.
8. Starting a burner ignition sequence.
    - Closing the (Main Board) Ar-S10 output (230VAC).
    - Relay Al-12 closes, igniter is undervoltage.
        1. After 4 seconds, the gas solenoid valve closes and the engine starts at ignition speed.
        2. After 6 seconds, flame feedback is activated Red LED on Aag card and 230VAC on Aag card PF12 input.
9. Opening the hand shower solenoid valve.
    - (Main Board) Ar-S15 output changes to 1 (230VAC).
10. Turbine rotation.
    - Changeover of motor relay E21-S22 (no reversal of direction of rotation in preheating mode).

11. Oven heating regulates when the temperature is reached.
    - Adjustment of fan motor speed and gas flow rate.
12. Switch to cooking mode by opening the door or pressing the control screen.
    - Opening and closing of door contact Ar-Sp input goes from 1 to 0 then from 0 to 1.
13. Starting the cooking process.
    - Cooking progress and time countdown visible from the bar graph.
14. Temperature control.
    - Adjustment of fan motor speed and gas flow rate.
15. Stop cooking.
    - One minute before the end of the elapsed time, a dialogue box offers several choices (continue, maintain temperature and stop).

COOKING IN AUTO MODE DRY COOKING

1. **COOKING**

   Press cooking button.
   - Display shows temperature setpoint (356°F), dry/wet zone selection, elapsed time and start tab.
2. Setting cooking temperature.
   - Set to 356°F by pressing display.
3. Setting cooking time.
   - Set by rotating the encoder to 5 minutes.
4. Data validation.
   - Press start button.
5. The oven first starts up in preheating mode.
6. Closing power contactor Kp (Power Contactor).
   - (Main Board) Ar-S09 output at 1 i.e. 230VAC.
7. Closing the Kr (Dry Heat Control) contactor.
   - (Main Board) Ar-S10 and Ar-S11 outputs set to 1 (230VAC).
8. Opening hand shower solenoid valve.
   - (Main Board) Ar-S15 output changes to 1 (230VAC).
9. Turbine rotation.
10. When set temperature reaches 90°C Kr contactor opens.
    - Ar-S10 and Ar-S11 outputs go to 0.
11. Boiler preheating if Pc28, contactor closed Kg.
    - (Main Board) Ar-S12 output switches to 1 (230VAC).
12. When set temperature is reached (176°F), the Kg (Steam Generator Heating) contactor opens.
    - (Main Board) Ar-S12 output goes to 0.
13. Resume dry heating until the set temperature is reached.
    - Closing of outputs (Main Board) Ar-S10 and Ar-S11 (230VAC between A1 and A2 of Kg (Steam Generator Heating Contactor).
14. Oven stops heating when the temperature is reached.
    - Opening of outputs (Main Board) Ar-S10 and Ar-S11 opening of Kr (Dry Heat Control Contactor), emission of an audible signal, display of the check tab and a LOAD message.
15. Switch to cooking mode by opening the door or pressing the control screen.
    - Opening and closing of the door contact (Main Board) Ar-Sp input goes from 1 to 0 then from 0 to 1, Ar-S01 output goes to 0 (LED panel off), turbine stops.
16. Starting the cooking process.
    - Cooking progress and time countdown visible from the progress bar graph (elapsed time/total time).
17. In DRY mode, humidity control is deactivated and the damper is open.
    - (Main Board) Ar- S02 goes to 1 24VDC.
18. First heat-up.
    - Outputs (Main Board) Ar-S10 and Ar-S11 are closed and then opened, as long as the ambient temperature is below the set temperature - BPC, heating remains activated.
19. Heating control.
    A. When temperature exceeds the set temperature +5°C, power is reduced (except during reversal of the direction of rotation of the muffle turbine motor +10sec);
    B. 3/3' regulation: 100% operating rate Kr is always on, outputs (Main Board) Ar-S10 and (Main Board) Ar-S11 supply 230VAC.

C. 2/3 regulation: operating rate 63% stopping rate 27% Kr is on 63% of the time, outputs (Main Board) Ar-S10 and (Main Board) Ar-S11 supply 230VAC.

D. 1/3' regulation: operating rate 36% stopping rate 54% Kr is on 36% of the time, outputs (Main Board) Ar-S10 and (Main Board) Ar-S11 supply 230VAC.

E. When heating is reactivated, a delay of 55sec is started, this resumes at the level before stopping, if there is no heating cut-off before the end of the delay, the power will be increased.

20. Turbine rotation.
    - Motor relays E21-S22 and E21-S23 switch every 4 minutes.
21. Stop cooking.
    - One minute before the end of the elapsed time, a beep is emitted and a dialogue box appears offering several choices (continue, maintain temperature and stop).

COOKING IN AUTO MODE STEAMING

1. Press steam button.
    - Set cooking temperature and time.
2. Setting cooking temperature.
    - Set to 208.4°F by pressing display.
3. Setting cooking time.
    - Set by rotating the encoder to 5 minutes.
4. Data Validation.
    - Press start button.
5. Oven first starts up in preheating mode.
    - A bar graph showing time and temperature appears .
6. Closing power contactor Kp (Power Contactor).
    - (Main Board) Ar-S09 output at 1 i.e. 230VAC.
    - Closing the Kgb (Steam Generator Heating) contactor (230VAC between A1 and A2.
7. Starting a burner ignition sequence.
    - Closing the Ar-S10 output (230VAC).
    - Relay (Main Board) Al-12 closes, igniter is undervoltage.
    - After 4 seconds, the gas solenoid valve closes and the engine starts at ignition speed.
    - After 6 seconds, flame feedback is activated Red LED on Aag card and 230VAC on Aag card PF12 input.
8. Opening sprayer solenoid valve.
    - (Main Board) Ar-S15 output changes to 1 (230VAC).
9. Turbine rotation.
    - Switching of motor relay E21-S23 for the duration of the cycle.
10. Oven heating regulates when the temperature is reached.
11. Switch to cooking mode by opening the door or pressing the control screen.
    - Opening and closing of door contact (Main Board) Ar-Sp input goes from 1 to 0 then from 0 to 1.
12. Start cooking process.
    - Cooking progress and time countdown visible from the bar graph.
13. Temperature control.
    - Adjustment of fan motor speed and gas flow rate.
14. Stop cooking.
    - One minute before the end of elapsed time, a dialogue box offers several choices (continue, maintain temperature and stop).

8. DIAGRAMS

ELECTRIC - DIAGRAMS

Chef Combi Electric Control Circuit Electrical Schematic

- CHEF ELECTRICAL CONTROL DIAGRAM - 61-62E-101-102E - AI6001

Chef Combi 61E Line/Load Electric Schematic - 208-240VAC - 3PH

- Chef Combi 61E Line/Load Electric Schematic - 208-240VAC - 3PH - AI5799A

Chef Combi 62E-101E Line/Load Electric Schematic - 208-240VAC - 3PH

- Chef Combi 62E-101E Line/Load Electric Schematic - 208-240VAC - 3PH - AI5796A

Chef Combi 102E Line/Load Electric Schematic - 208-240VAC - 3PH

- Chef Combi 102E Line/Load Electric Schematic - 208-240VAC - 3PH - AI6010A

Chef Combi 61E Line/Load Electric Schematic - 480VAC - 3PH

- Chef Combi 61E Line/Load Electric Schematic - 480VAC - 3PH - AI5798A

Chef Combi 62E-101E Line/Load Electric Schematic - 480VAC - 3PH

- Chef Combi 62E-101E Line/Load Electric Schematic - 480VAC - 3PH - AI6008A

Chef Combi 102E Line/Load Electric Schematic - 480VAC - 3PH

- Chef Combi 102E Line/Load Electric Schematic - 480VAC - 3PH - AI5795A

OPTIONS - DIAGRAMS

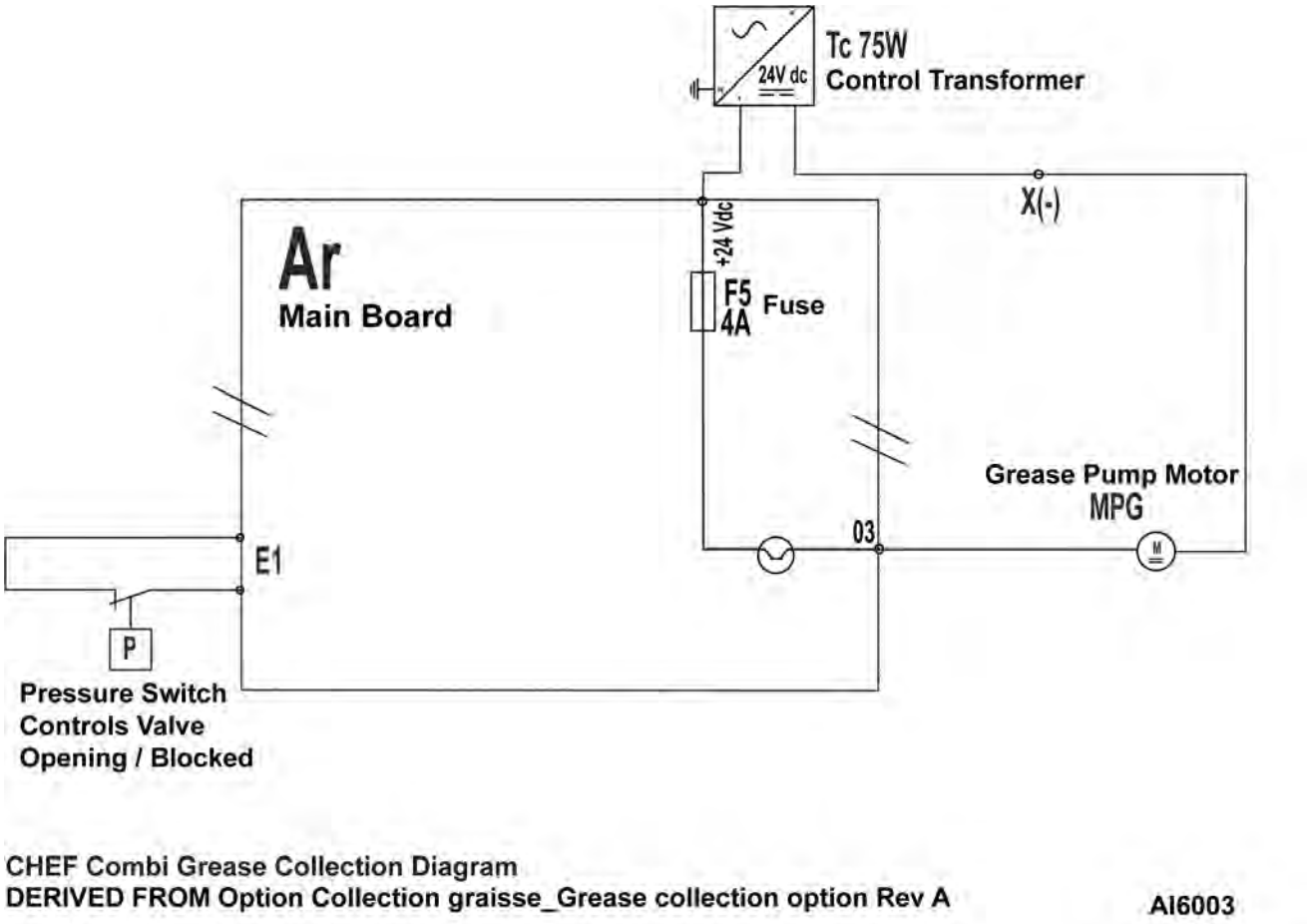


Fig. 190

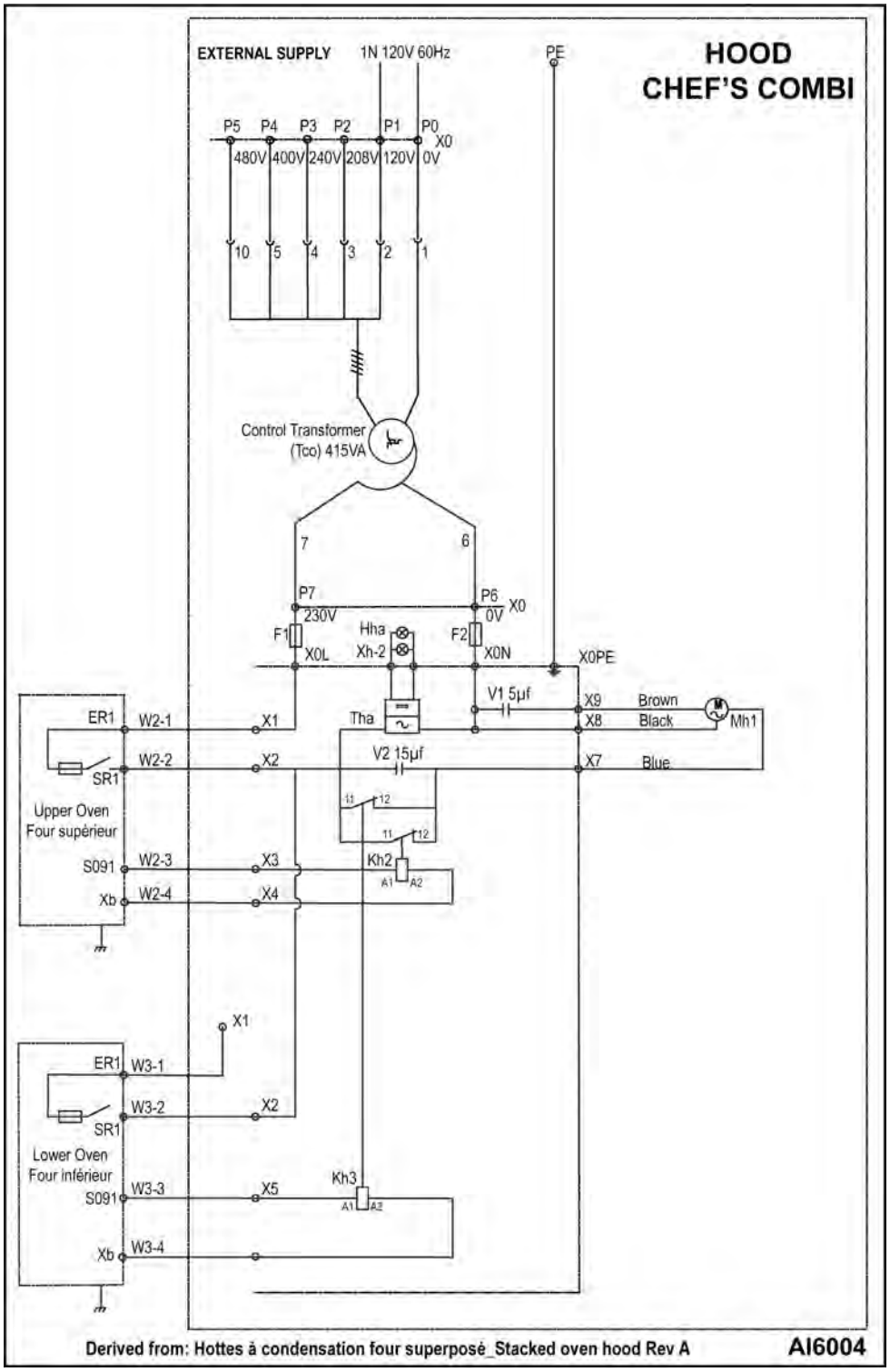

EXTERNAL SUPPLY
1N 120V 60Hz
PE
HOOD
CHEF'S COMBI
P5 P4 P3 P2 P1 P0
X0
480V 400V 240V 208V 120V 0V
10 5 4 3 2 1
Control Transformer
(Tco) 415VA
7 6
P7 P6
230V 0V
X0
F1 F2
Hha
Xh-2
X0L X0N X0PE
V1 5µf
X9 Brown
X8 Black
X7 Blue
Mh1
Tha
V2 15µf
ER1 W2-1 X1
SR1 W2-2 X2
Upper Oven
Four supérieur
S091 W2-3 X3
Xb W2-4 X4
Kh2
A1 A2
11 12
ER1 W3-1
SR1 W3-2 X2
Lower Oven
Four inférieur
S091 W3-3 X5
Xb W3-4
Kh3
Derived from: Hottes à condensation four superposé_Stacked oven hood Rev A
AI6004

Fig. 191

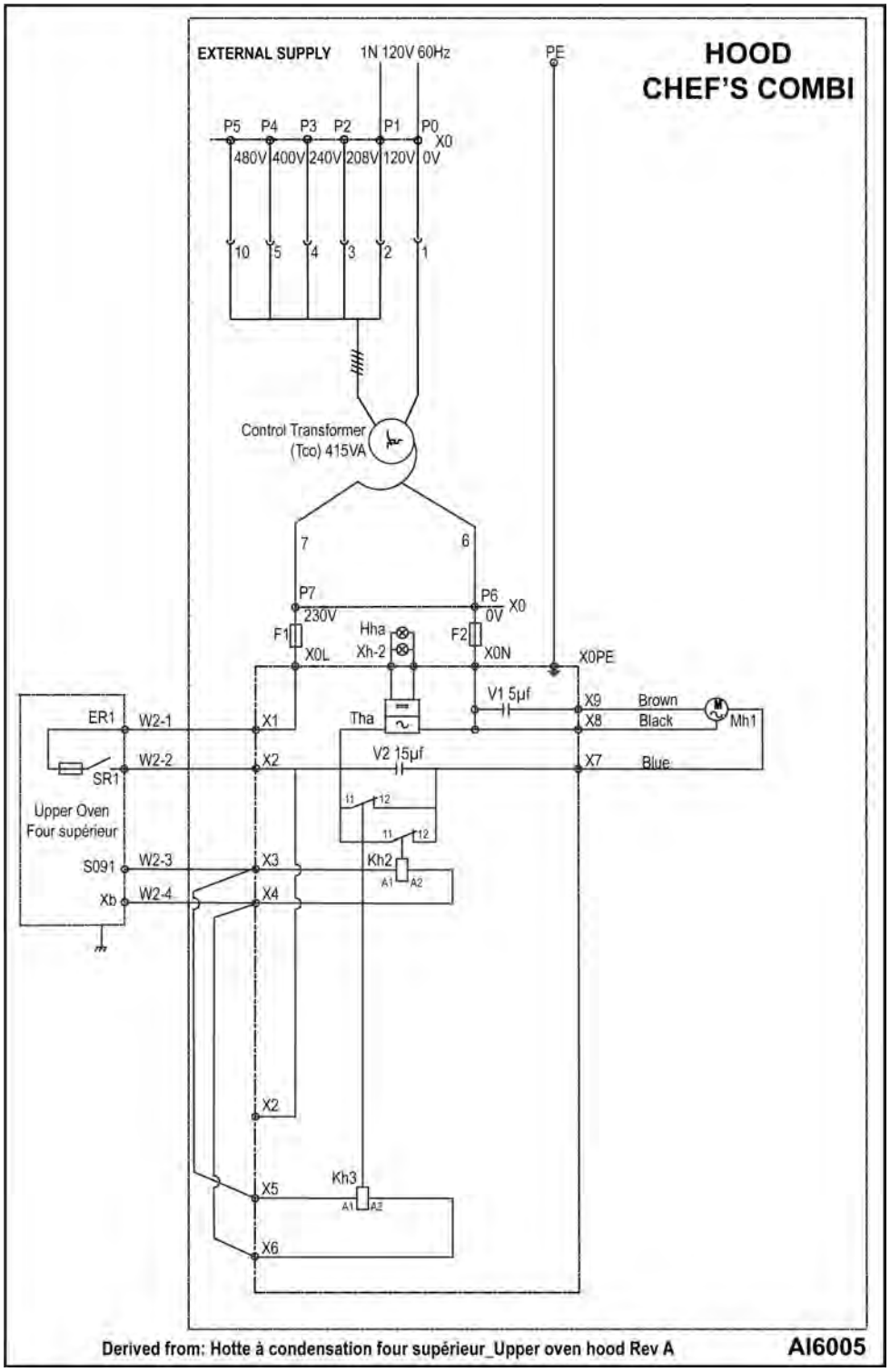

EXTERNAL SUPPLY
1N 120V 60Hz
PE
HOOD
CHEF'S COMBI
P5 P4 P3 P2 P1 P0
X0
480V 400V 240V 208V 120V 0V
10 5 4 3 2 1
Control Transformer
(Tco) 415VA
7
6
P7
P6
X0
230V
0V
F1
F2
Hha
Xh-2
X0L
X0N
X0PE
V1 5µf
X9
Brown
X8
Black
X7
Blue
Mh1
Tha
V2 15µf
ER1
W2-1
X1
SR1
W2-2
X2
Upper Oven
Four supérieur
S091
W2-3
X3
Xb
W2-4
X4
11
12
Kh2
A1
A2
X2
Kh3
X5
X6
Derived from: Hotte à condensation four supérieur_Upper oven hood Rev A
AI6005

Fig. 192

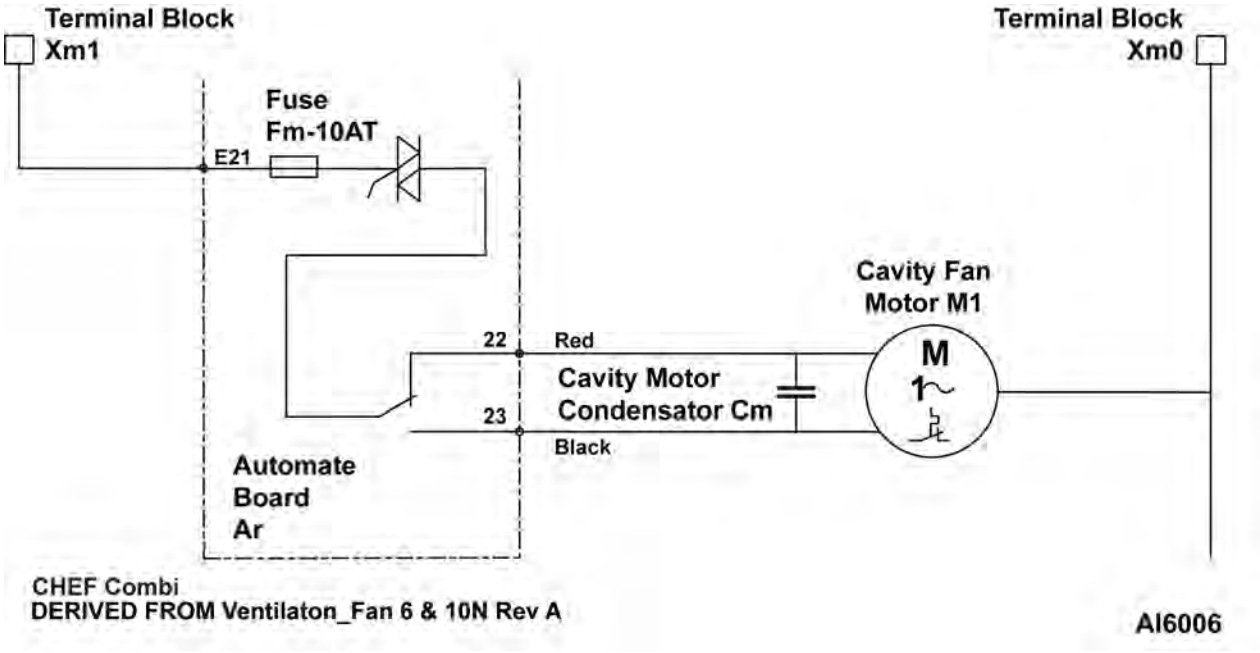


Fig. 193

GAS - DIAGRAMS

Chef Combi Gas Control Circuit Electric Schematic

- Chef Combi Gas Control Circut Electric Schematic - 61G-62G-101G-102G - 208-240VAC - 3PH - AI6002A

Chef Combi 61G-101G Line/Load Electric Schematic - 230VAC - 3PH

- Chef Combi 61G-101G Line/Load Electric Schematic - 230VAC - 3PH - AI5797A
- CHEF Electrical Control Schematic Diagram - 62 -102G - 208-240 - 3PH - AI6173

9. TROUBLESHOOTING

TROUBLESHOOTING ACCESS

Access Error History

1. Go to **HOME**>Settings.

Fig. 194

2. Log into **SERVICE** with PIN CODE.

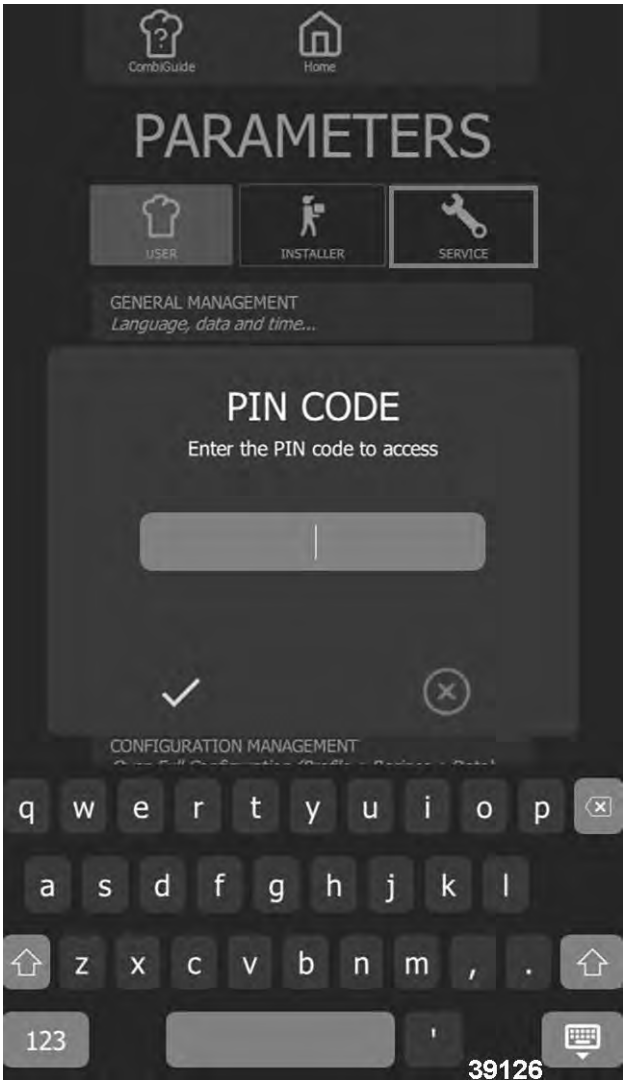


Fig. 195

3. Select **ERROR: troubleshooting** for list of all error code description.

Fig. 196

NOTE: Screen displays error table, starting with the first number listed in error table. Use encoder to scroll through error numbers list to desired setting.

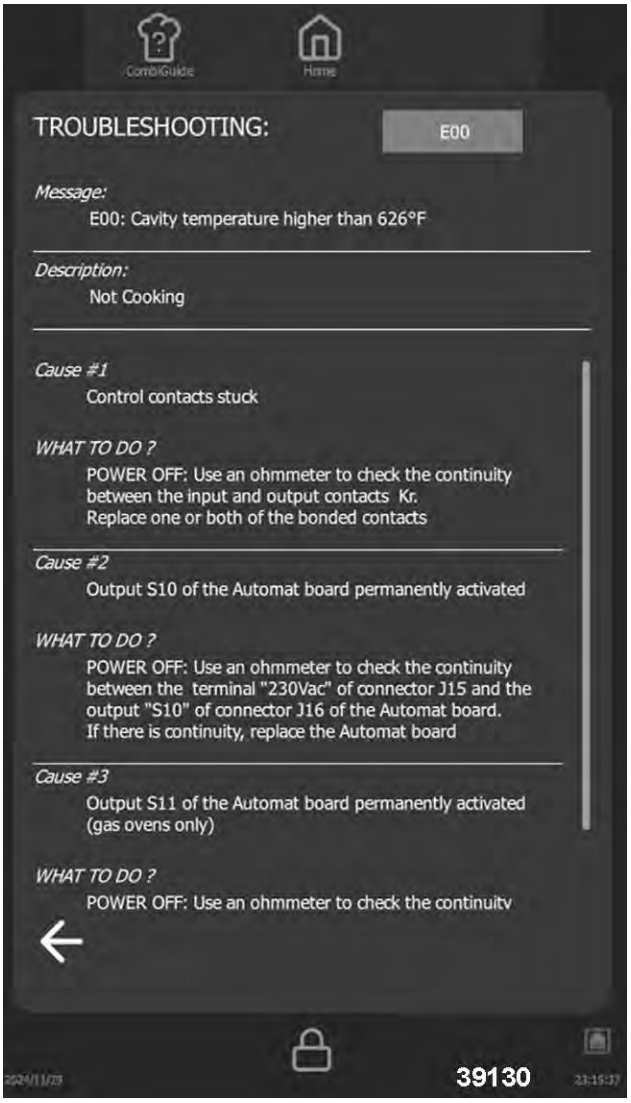


Fig. 197

4. Select **ERROR: history** for specific oven history of error codes.

NOTE: Error History screen provides a detailed view of incidents that have occurred, presented in chronological order from most recent to oldest. This feature enables users to follow and understand the evolution of problems encountered by the Chef's Combi. Error messages are recorded in the history for a set period of xx months, ensuring reliable tracking of incidents over an extended period.

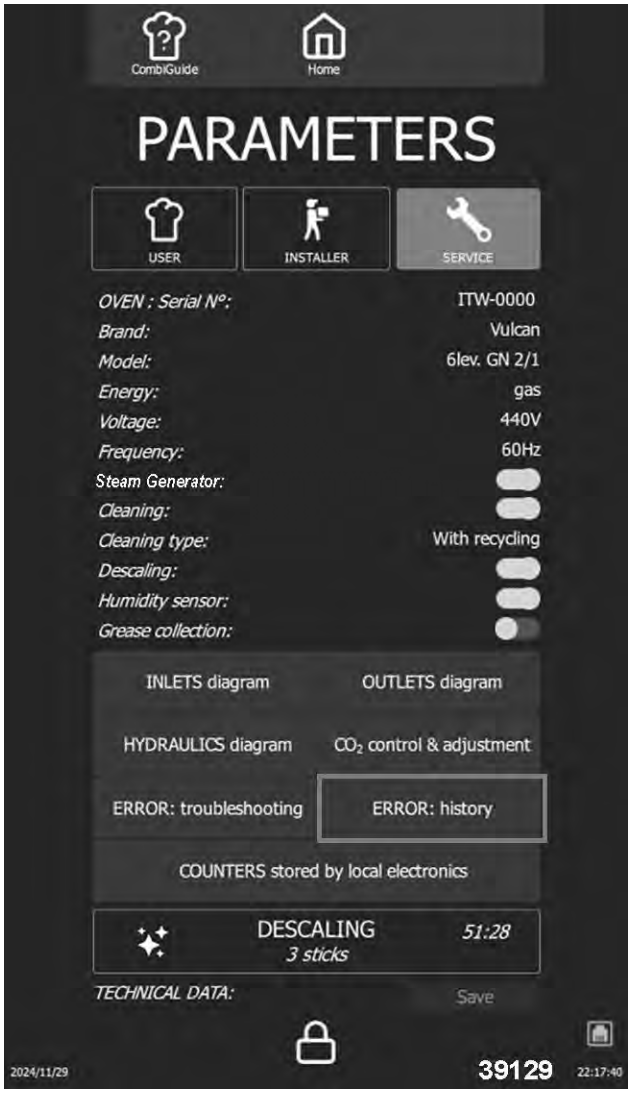


Fig. 198

NOTE: Select in error number field to bring up keypad and enter desired target number.

NOTICE

When browsing history, select the specific error to be automatically redirected to this screen.

Fig. 199

PT100 PROBE CHECK

The PT100 probe resistance determines temperature. It has a resistance of 100Ω at 32°F (-0°C) and 138.5Ω at 212°F (100°C) . The sensor is linear and its connections are not polarized. See table below for temperature / resistance ratio.

Temperature in °F relative to Resistance in Ω for PT100 probe										
°F	0	1	2	3	4	5	6	7	8	9
30			100.00	100.22	10043	100.65	100.87	101.08	101.30	101.52
40	101.73	101.95	102.17	102.39	102.60	102.82	103.04	103.25	103.47	103.69
50	103.90	104.12	104.33	104.55	104.77	104.98	105.20	105.42	105.63	105.85
60	106.06	106.28	106.50	106.71	106.93	107.14	107.36	107.58	107.79	108.01
70	108.22	108.44	108.66	108.87	109.09	109.30	109.52	109.73	109.95	110.16
80	110.38	110.60	110.81	111.03	111.24	111.46	111.67	111.89	112.10	112.32
90	112.53	112.75	112.96	113.18	113.39	113.61	113.82	114.04	114.25	114.47
100	114.68	114.90	115.11	115.33	115.54	115.75	115.97	116.18	116.40	116.61
110	116.83	117.04	117.26	117.47	117.68	117.90	118.11	118.33	118.54	118.75
120	118.97	119.18	119.40	119.61	119.82	120.04	120.25	120.47	120.68	120.89
130	121.11	121.32	121.53	121.75	121.96	122.17	122.39	122.60	122.81	123.03
140	123.24	123.45	123.67	123.88	124.09	124.31	124.52	124.73	124.94	125.16
150	125.37	125.58	125.80	126.01	126.22	126.44	126.65	126.86	127.07	127.29
160	127.50	127.71	127.92	128.14	128.35	128.56	128.77	128.99	129.20	129.41
170	129.62	129.84	130.05	130.26	130.47	130.68	130.90	131.11	131.32	131.53
180	131.74	131.96	132.17	132.38	132.59	132.80	133.01	133.23	133.44	133.65
190	133.86	134.07	134.28	134.49	134.71	134.92	135.13	135.34	135.55	135.76
200	135.97	136.18	136.40	136.61	136.82	137.03	137.24	137.45	137.66	137.87
210	138.08	138.29	138.50	138.72	138.93	139.14	139.35	139.56	139.77	139.98
220	140.19	140.40	140.61	140.82	141.03	141.24	141.45	141.66	141.87	142.08
230	142.29	142.50	142.71	142.92	143.13	143.34	143.55	143.76	143.97	144.18
240	144.39	144.60	144.81	145.02	145.23	145.44	145.65	145.86	146.07	146.28
250	146.49	146.70	146.90	147.11	147.32	147.53	147.74	147.95	148.16	148.37
260	148.58	148.79	149.00	149.20	149.41	149.62	149.83	150.04	150.25	150.46
270	150.67	150.87	151.08	151.29	151.50	151.71	151.92	152.13	152.33	152.54
280	152.75	152.96	153.17	153.38	153.58	153.79	154.00	154.21	154.42	154.62
290	154.83	155.04	155.25	155.46	155.66	155.87	156.08	156.29	156.49	156.70
300	156.91	157.12	157.32	157.53	157.74	157.95	158.15	158.36	158.57	158.78
310	158.98	159.19	159.40	159.60	159.81	160.02	160.23	160.43	160.64	160.85
320	161.05	161.26	161.47	161.67	161.88	162.09	162.29	162.50	162.71	162.91
330	163.12	163.33	163.53	163.74	163.95	164.15	164.36	164.56	164.77	164.98
340	165.18	165.39	165.60	165.80	166.01	166.21	166.42	166.63	166.83	167.04
350	167.24	167.45	167.65	167.86	168.07	168.27	168.48	168.68	168.89	169.09
360	169.30	169.50	169.71	169.92	170.12	170.33	170.53	170.74	170.94	171.15
370	171.35	171.56	171.76	171.97	172.17	172.38	172.58	172.79	172.99	173.20
380	173.40	173.61	173.81	174.01	174.22	174.42	174.63	174.83	175.04	175.24
390	175.45	175.65	175.86	176.06	176.26	176.47	176.67	176.88	177.08	177.28
400	177.49	177.69	177.90	178.10	178.30	178.51	178.71	178.92	179.12	179.32
410	179.53	179.73	179.93	180.14	180.34	180.54	180.75	180.95	181.15	181.36
420	181.56	181.76	181.97	182.17	182.37	182.58	182.78	182.98	183.19	183.39
430	183.59	183.80	184.00	184.20	184.41	184.61	184.81	185.01	185.21	185.42
440	185.62	185.82	186.03	186.23	186.43	186.63	186.83	187.04	187.24	187.44

32140

Fig. 200

ERROR CODES

⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect power and follow Lockout/Tagout procedures, attach test equipment and reapply power to test.

NOTICE

Before replacing components without being certain of the problem, it is important to use all tools supplied with oven to target the real problem: error history, counters, error message and associated solutions, test using Parameter screen, check status of LED's, etc.

1. Interview customer:
    - Collect as much information as possible from the user about problems encountered (frequency, anomalies, blocking errors, etc.)
2. Identify problem:
    - Verify electricity, gas, water and are correctly supplied depending on model.
    - Visually inspect interior of oven for signs of possible damage or obstructions.
    - Check error history, counters as these may give indications of type of problem encountered and its frequency.
    - Write down details of problem encountered for better understanding.
3. If error code is displayed, research the data for error:
    - Refer to: TROUBLESHOOTING ACCESS.
    - Refer to: ERROR CODE TABLE below.
4. If no error code is displayed:
    - Troubleshoot maintenance screens. Check maintenance screens of outlets, inlets and hydraulics in the maintenance parameters of oven interface.
    - Refer to OVEN TROUBLESHOOTING.
    - Write down any anomalies and proceed with troubleshooting.
    - Troubleshoot communication LEDs. Refer to BOARD LEDS.
5. Contact Technical Support if necessary.

NOTICE

To service, PLACE MAIN BOARD IN SERVICE POSITION.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E00	Cavity overheat greater than 626°F.	Control contacts stuck.	POWER OFF: Using an ohmmeter, place test probes on terminal clamping screws to check resistance between L and T for each pole of the Kr contactor(s). The value must be equal to “OL”; if not, replace the faulty contactor(s).
		Output S10 of Main board permanently activated.	POWER OFF: Using an ohmmeter, place test probes on terminal clamping screws. Check continuity between “230Vac” terminal of connector J15 and the “S10” output of connector J16 on Main board. If there is continuity, replace Main board.
		Output S11 of Main board permanently activated (gas ovens only). **NOTE:** 20 Level gas models only.	POWER OFF: Using an ohmmeter, place test probes on terminal clamping screws. Check continuity between “230Vac” terminal of connector J15 and “S11” output of connector J16 on Main board. If there is continuity, replace Main board.
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
E01	Ambient sensor cavity fault.	**NOTE:** Open “Inlets Diagram” in “Service” screen and check the temperature indicated by the ‘Ban’ ambient probe. If the value is “-°F,” the sensor circuit is faulty (short-circuited or open). Check the following points:	
		Wire broken (open circuit) in probe or input connection "Ban".	POWER OFF: Verify the connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect Pt100 “Ban” probe from connector J2 on the Main board. Measure between the two white wires using an ohmmeter. (By example, the temperature of the cavity is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If the measured value is “OL,” the circuit is open. Repair connection, or replace sensor.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Short circuit in the probe or probe input connection "Ban".	POWER OFF: Verify the connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If the problem persists, disconnect the Pt100 “Ban” probe from connector J2 on the Main board and measure between the two white wires using an ohmmeter. (By example, the temperature of the cavity is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If the value measured is less than 100 Ω, there is a short circuit. Repair connection, or replace probe.
		Main board electrical fault.	POWER OFF: If probe and connections are functioning, replace Main board.
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
NOTE: To reset this fault, power supply to oven must be cut off by disconnecting associated protection circuit breaker.			
E02	Ambient sensor cavity fault.	Wire broken in probe or input connection "Baa" Pt100(Temperature Probe).	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect the Pt100 “Baa” temperature probe from connector J2 on the Main board and measure between the two white wires using an ohmmeter. (By example, the température of the cavity is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If the measured value is “OL,” the circuit is open. Repair connection, or replace probe.
			Disconnect probe Pt100 "Baa" from connecter J2 of Main board and take a measurement between 2 red wires using an ohmmeter; If circuit is broken (measurement is OL), repair connection. If not, replace probe.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Short circuit in the probe or probe input connection "Baa" (Temperature Probe).	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect Pt100 “Baa” probe from connector J2 on Main board and measure between the two white wires using an ohmmeter. (By example, the temperature of the cavity is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If value measured is less than 100 Ω, there is a short circuit. Repair connection, or replace probe.
		Main board electrical fault.	POWER OFF: If probe and connections are functioning, replace Main board.
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
E10	Steam generator scale.	Water hardness is incorrectly set in the installation parameters	Measure water hardness and adjust hardness parameter in the installation settings. Descale steam generator. Refer to: DESCALE
		Defective water softener or water filter.	Measure water hardness and check or have checked that the water softener is working properly. Descale steam generator. Refer to: DESCALE
		Limescale has built up in steam generator and recommended descaling procedures have not been carried out.	Descale steam generator. Refer to: DESCALE
E11	High level of steam generator scale.	Water hardness is incorrectly set in the installation parameters	Measure water hardness and check or have checked that the water softener is working properly. Descale steam generator. Refer to: DESCALE
		Defective water softener.	Measure water hardness and check or have checked that the water softener is working properly. Descale steam generator. Refer to: DESCALE

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Limescale has built up in steam generator and recommended descaling procedures have not been carried out.	Descale steam generator. Refer to: DESCALE
E12	Steam generator overheats greater than 266°F.	The steam generator is heating; however, water level is low: Water level controller is faulty.	Check water level control functionality "BnC" on the "Parameter screen" page: If control sensor is immersed in water, BnC = 1. If the control sensor is not in water, BnC = 0. If not functioning, check state (Presence of calcium; Mineral fouling).
		Steam generator heats even though water level is too low. Sensor connection short-circuited or grounded.	Disconnect J1 on the main board and take a reading between the terminals "BnC" and "GROUND" using an ohmmeter; If there is a short circuit, locate fault and repair as required.
		The steam generator is heating; however water level is low: Input "BnC" on Main board is defective.	Replace Main board.
E13	Steam generator temperature sensor fault.	**NOTE:** Open “Inlets diagram” in “Maintenance” screen and check the temperature indicated by the "Bgn" steam generator probe. If value is “- °F”, the sensor circuit is faulty (short-circuited or open). Check the following points:	
		Wire broken in probe or input connection "Bgn" (Sensor).	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect Pt100 "Bgn" sensor from connector J2 on Main board and measure between the two white wires using an ohmmeter. (By example, température is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If measured value is “OL,” the circuit is open. Repair connection, or replace probe.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Short circuit in probe or probe input connection "Bgn." (Sensor)	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect Pt100 "Bgn" sensor from connector J2 on Main board and measure between the two white wires using an ohmmeter. (By example, the température is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If measured value is “OL,” the circuit is open. Repair connection, or replace probe.
		Main board electrical fault.	POWER OFF: If probe and connections are functioning, replace Main board.
E14	Steam generator temperature sensor fault.	Wire broken (open circuit) in probe or input connection "Bga."	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect Pt100 “Bga” sensor from connector J2 on Main board. Measure between the two red wires using an ohmmeter. (By example, the température is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If measured value is “OL,” the circuit is open. Repair connection, or replace probe.
		Short circuit (measurement is OL) in probe or probe input connection "Bga."	POWER OFF: Verify connector is properly inserted into its socket and that each wire is connected to each terminal on the connector. If problem persists, disconnect the Pt100 “Bga” sensor from connector J2 on the Main board and measure between the two red wires using an ohmmeter. (By example, the température is between 70°F and 80°F, the measured value will be between 108 Ω and 110 Ω). If measured value is “OL,” the circuit is open. Repair connection, or replace probe.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Main board electrical fault.	POWER OFF: If probe and connections are functioning, replace Main board.
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
E15	The level of water in steam generator has not been reached after 117 seconds.	Water supply closed.	Verify water supply in-line valves are open.
		Water pressure too low.	Verify water pressure at oven connection. When water supply to oven is maximum, the pressure must be greater than 1.5 bar.
		Steam generator is not getting water supply: Fuse "F1" on Main board (LED 800) has blown.	Verify cause of blown fuse. Check state of condenser's solenoids (Ycond.) and cooling's solenoid (Ycool). Perform needed repairs and replace fuse with same type.
		Steam generator is not getting water supply: Output "S20" on Main board is faulty.	Press "Yboiler" button from "Hydraulics diagram" on Service screen. Measure voltage between ouput "S20" of the Automate and terminal "Xb". If voltage is less than 203V, replace Main board.
		Steam generator is not getting water supply: steam generator fill solenoid valve is defective.	**⚠ WARNING** **The output is controlled by a triac: a voltage at the output.**
		Steam generator is not getting water supply: steam generator fill solenoid valve is defective.	Disconnect water supply pipe from steam generator at the elbow and place in a container. Press "Yboiler" button from "Hydraulics Diagram" on Service screen and verify water is coming out of the pipe. If no water is flowing, teh "Yboiler" steam generator fill solenoid valve is defective and must be replaced.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Water flow rate too low.	Disconnect water supply pipe from steam generator at the elbow and place in a container. Press "Yboiler" button from "Hydraulics Diagram" and let water run into the container for as long as the solenoid valve is open (1 minute). **NOTE:** The amount of water collected should be approximately 1,3 gallons. If less than this, check condition of filters and flow limiter in solenoid valve (clogging, etc.). Clean filters or replace solenoid valve
		Steam generator water level control failure.	Check functionality of water level control "BnC" on the technical control screen. If water is detected, BnC = 1. If sensor is not in water, BnC = 0. If not functioning, check sensor state (Presence of calcium; Mineral fouling.), and its electrical connection. If sensor is functioning correctly, change the Main board.
E16	Steam generator drainage pump fault.	24/230VAC supply voltage input fault.	With a voltmeter, check supply voltage between input 24/230VAC on Main board and terminal "Xb." This voltage should be 230V (120V on ovens version "UL"). If not, find the cause of the fault and repair as required.
		Fuse F4 blown.	Check state of fuse LED F4; If lit, check state of fuse F4. If it is blown, find the cause (Check state of descaling pump (Mdg) and the cavity drainage pump (Mvm)). Repair by replacing fuse with same type.
		Fault with Main board switch S06.	Connect a voltmeter between terminal S06 on Main board and terminal Xb. Activate relay output S06 from the technical control screen. If voltage reads zero when relay is operated, replace Main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Drainage pump is not powered.	Connect a voltmeter to terminals on steam generator drain pump (Mvg). Activate relay output S06 from the technical control screen. If voltage reads zero when relay is operating, check the pump cabling and repair as required.
		Steam generator drainage pump defective or blocked.	Activate relay output S06 from the technical control screen. If pump does not function, visually check its state: clean or swap out as required.
		Steam generator water level control failure.	Check functionality of water level control "BnC" on the technical control screen. If water is detected, BnC = 1 if sensor is not in water, BnC = 0. If not functioning, check sensor state (Presence of calcium; Mineral fouling...), and its electrical connection. If sensor is functioning correctly, change Main board.
E20	Level of water in cleaning tank has not been reached after 50 seconds.	Water supply closed.	Open water supply.
		Water pressure too low.	Check water pressure at oven connection. During maximum kitchen water use, pressure must be greater than 1.5 bar.
		Water flow rate too low.	Check state of filter and condenser flow limiting solenoid valve (Fouling...). Clean if required. Water flow rate should be approximately 5l/min.
		Fuse F1 blown.	Check state of fuse LED F1; If lit, check the state of fuse F1. If it is blown, find the cause (Check state of solenoid valves Ycool and Yboiler). Repair by replacing fuse with same type.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Fault with Main board output S18.	Connect a voltmeter between terminal S18 on Main board and terminal Xb. Activate relay output S18 from the technical control screen. If the voltage is zero when the output is activated, replace Main board. **⚠ WARNING** **The output is controlled by a triac: a voltage can be read at the output, even when the triac is not open.**
		Condenser solenoid valve (Ycond) is not powered.	Connect a voltmeter to terminals on condenser solenoid valve (Ycond). Activate relay output S18 from the technical control screen. If voltage reads zero when output is operating, check the solenoid valve cabling and repair as required.
		Condenser solenoid valve defective.	Activate output S18 from the technical control screen. If the solenoid valve does not function, then replace.
		Self clean cleaning box water level control failure.	Check water level control functionality for cleaning tank "BnL" on the technical control screen. If water is detected, BnL = 1; if sensor is not in water, BnL = 0. If not functioning, check sensor state (Presence of calcium; Mineral fouling...), and its electrical connection. If sensor is functioning correctly, change Main board.
E21	Self cleaning tank drainage pump fault.	21/230 VAC supply voltage input fault.	With a voltmeter, check supply voltage between input 24/230Vac of the Main board and terminal "Xb". This voltage should be 120V. If not, find the cause of fault and repair as required.
		Fuse F4 blown.	Check state of fuse LED F4; If lit, check state of fuse F4. If it is blown, find the cause (Check state of descaling pump (Mdg) and cavity drain pump (Mvm)). Repair by replacing fuse with the same model.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Fault with Main card switch S05.	Connect voltmeter between terminal S05 on Main card and terminal Xb. Activate relay output S05 on technical control screen. If the voltage reads zero when the relay is operated, replace Main board.
		Drainage pump is not powered.	Connect voltmeter to terminals on drain pump (Mvm). Activate relay output S05 on technical control screen. If voltage reads zero when the relay is operated, check pump cabling and repair as required.
		Cleaning tank drainage pump defective or blocked.	Activate relay output S05 on technical control screen. If pump does not function, visually check its state: clean or swap out as required.
		Self-clean wash box water level control failure.	Check functionality of water level control for cleaning tank "BnL", on technical control screen. If water is detected, BnL = 1; if the sensor is not in water, BnL = 0. If not functioning, check state of sensor (Presence of calcium; Mineral fouling). and its electrical connection. If the sensor is functioning correctly, change Main board.
E22	Descaling pump cartridge fault.	24/230VAC supply voltage input fault.	Check supply voltage between input 24/230VAC on Main board and terminal "Xb." This voltage should be 230V (120V on ovens version "UL"). If not, find the cause of fault and repair as required.
		Fuse F4 blown.	Check state of fuse LED F4; If lit, check the state of fuse F4. If it is blown, find the cause (Check state of steam generator drain pump (Mvg) and cavity drain pump (Mvm)). Repair by replacing fuse with same model.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Fault with the Main board switch S04.	Connect voltmeter between terminal S04 on Main board and terminal Xb. Activate relay output S05 from the technical control screen. If voltage reads zero when the relay is operated, replace Main board.
		Descale pump is not powered.	Connect a voltmeter to terminals on descale pump (Mdg). Activate relay output S04 on technical control screen. If voltage reads zero when relay is operated, check pump cabling and repair as required.
		Descaling tank drainage pump defective or blocked.	Activate relay output S04 from the technical control screen. If pump does not function, visually check its state: clean or swap out as required.
		Steam Generator water level control failure.	Check water level control functionality on technical control screen. If water is detected, BnC = 1; if sensor is not in water, BnC = 0. If not functioning, check state of sensor (Presence of calcium; Mineral fouling...). and its electrical connection. If sensor is functioning correctly, change Main board.
E23	Cleaning pump fault.	230VAC supply voltage input fault.	With voltmeter, check supply voltage between input 230VAC of main board and terminal Xb. This voltage should be 230V. If not, find the cause of fault and repair as required.
		Fuse F2 blown.	Check status of fuse F2 LED; if off, check status of fuse F2. If fuse is blown, look for the cause (check status of cleaning pump (Mpn) and solenoid valves for hand sprayer (Yspray) and / or descaling box filling (Ydescal)). Carry out repairs and replace fuse with same model.
		Fault with main board switch S13.	Connect voltmeter between terminal S13 of main board and terminal Xb. Activate relay output S13 from technical control screen. If voltage reads zero when relay is operated, replace main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Cleaning pump is not powered.	Connect voltmeter to terminals of cleaning pump (Mpn). Activate relay output S13 from technical control screen. If voltage reads zero when relay is operated, check pump cabling and repair as required.
		Cleaning pump defective or blocked.	Activate relay output S13 from technical control screen. If pump does not function, visually check its state. Clean or swap out as required.
		Clean wash box water level control failure.	Check water level control function on technical control screens; if probe is in the water, BnL value = 1, and if it is out of the water, BnL value = 0. In the event of a malfunction, check condition of probe (scale, dirt) and its electrical connection. If probe is not functional, replace main board.
		Cleaning pump capacitor faulty or incorrectly connected.	Check cleaning pump capacitor connection (plugs well plugged in and no traces of oxidation). Switch off oven, disconnect capacitor, and connect a multimeter in its place to check capacity of 6.3µf (+/-5%) capacitor. If value is incorrect, replace capacitor.
E30	Failed core probe.	Check for fault on "Parameter screen."	Open "Parameter screen" page and check temperature being indicated by the food probe "Bsc." If value is "---" at all points, the common point of the probe (Bsc com) is faulty (either short-circuited or open, measurment is OL).
		Short circuit or wire broken (open circuit, measurment is OL) in probe or input connection Bsc Com.	Disconnect probe Pt100 from Main card and take ohmmeter readings between points Bsc com and Bsc1, Bsc2 and Bsc3; If the circuit is broken (measurment is OL), repair connection. If not, replace probe.
		Main board electrical fault.	If probe and connections are functioning, replace Main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Extension lead between the Main board and the probe is faulty.	1. Check ohm values of each PT100 probe: • Measure values between common (yellow wire) to each of the other wires. • Compare values with Conversion tables - PT100 Probe vaules. 2. Repeat Step 1 on probe side and board side. • If the values differ, replace the extension lead between the probe and Main board."
E31	Food probe degraded.	Check fault on the "Parameter screen."	Open "Parameter screen" page and check temperature being indicated by the food probe "Bsc." If one value is "---", this point of the probe (Bsc1 => Bsc3) is faulty (either short-circuited or open, measurment is OL).
		Short circuit or wire broken (open circuit, measurment is OL) in probe or input connection Bsc Com.	Disconnect probe Pt100 from Main card and take ohmmeter readings between points Bsc com and Bsc1, Bsc2 and Bsc3; If the circuit is broken, repair connection. If not, replace probe.
		Main board electrical fault.	If probe and connections are functioning, replace Main board.
		Extension lead between the Main board and the probe is faulty.	• Check ohm values of each PT100 probe: • Measure values between common (yellow wire) to each of the other wires. • Compare values with Conversion tables - PT100 Probe vaules. 1. Repeat Step 1 on probe side and board side. • If the values differ, replace the extension lead between the probe and Main board."
E32	Food probe not inserted.	Probe not inserted in food, incorrect measurement values.	Insert food probe, take care to follow the instructions of pricking.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E33	Food probe not properly inserted.	-	Reinsert probe.
E34	USB Core Probe out of service.	Probe is detected at USB port but temperature is not being measured.	Open "Parameter screen" page and check temperature being indicated by the food probe "USB." If value is "---" at all points, probe is defective. Replace probe.
E35	USB food probe degraded.	One or more of the measured temperatures are out of range.	Open "Parameter screen" page and check temperature being indicated by the food probe "USB." If value is "---" at all points, probe is defective. Replace probe.
E40	Gas safety device active on steam generator convection.	Gas inlet valve closed - no gas - Incorrect gas type.	Check facility gas supply. Check type of gas being supplied conforms with that shown on the oven's specification plate. Open gas valve.
		No grounding on power supply.	Check the grounding with nonmenclature /megohmmeter. Check or have someone check the continuity of the ground and the grounding.
		Gas pressure too low.	Measure t gas pressure by measuring from input of the gas valve "Pin" (Refer to: GAS VALVE ADJUSTMENT) at the appliance connection when all appliances running off the same supply are operating at maximum capacity. The gas pressure must be within allowed limits.
		Gas board output AL12 defective.	Connect voltmeter between terminal cavity ignitor (AL12) on add-on gas board (Aag) and terminal Xb. Activate relay output cavity ignitor (AL12) in service screen. If voltage reads zero when relay is operated, replace add-on gas board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Spark box Ear is not powered.	Connect a voltmeter to the terminals of the "convection" burner spark box Ear. Activate relay output AL12 from "Outlets diagram" in the "Service" screen. If voltage reads zero when the relay is operated, check the lighter cabling and repair as required.
		Spark box Ear is defective.	Activate output relay AL12 from "Outlets diagram" in the "Service" screen. If the spark box Ear does not function, then replace.
		Gas board (Aag) is received a signal from the safety box "Avr1" on SECU12 input on the gas board "Aag".	Check if flame sensor is properly connected to the safety box "Avr1". If properly connected, replace safety box "Avr1".
		Incorrect flame sensor setting. Incorrect spacing of the gas flame sensor.	Check spacing of ignition electrodes and flame sensor.
		Input PF1 (6 and 10 level cavity burner (flame sense) (or PF2 (20 level 2nd cavity burner flame sense) on oven 20N) on gas add-on board is defective.	Change add-on gas board (Aag).
E41	Gas safety device active on steam generator burner.	Gas inlet valve closed. No gas or incorrect gas type supplied.	Check facility gas. Verify type of gas being supplied conforms with oven name plate. Open gas valve.
		Gas pressure too low.	Check gas pressure at oven connection when all appliances running off the same supply are operating at maximum capacity. Gas pressure must be within the allowed limits. If not, adjust gas pressure or increase gas supply capacity. (Expansion valve, pipe diameter).
		Gas board AL3 output defective.	Connect voltmeter between terminal AL3 of the add-on gas board (Aag) terminal Xb (Terminal Block). Operate output relay AL3 from the technical control screen. If voltage reads zero when relay is operated, replace the add-on gas board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Spark box Eag has no supply power.	Connect a voltmeter to the terminals of the steam generator burner spark bnox Eag. Operate the output relay AL3 from the technical control screen. If the voltage reads zero when the relay is operated, check the lighter cabling and repair as required.
		Spark box Eag is defective.	Activate relay output AL3 from technical control screen. If steam generator burner spark box does not function, then replace.
		Incorrect setting of flame control electrode.	Check state and position of flame controller electrodes.
		The gas add-on board (Aag) is not receiving flame lit signal at steam generator flame sensor (PF3).	Connect a voltmeter between PF3 (steam generator burner flame sense) and Xb (Terminal Block). While burner is functioning, voltage must be 230V. If not, check flame control box cabling and repair or replace as required.
		Input PF3 (steam generator burner flame sense) on gas add-on board is defective.	Change add on gas board (Aag).
E50	Humidity sensor faulty. **NOTE:** Error E50 only occurs during cooking, not preheating.	**NOTICE** Open “Inlets diagram” on “Service" screen and check humidity value delivered by the sensor. This must be greater than 3%. If this is not the case, check the following points:	
		F2 fuse on the “Ahu” humidity board is blown.	Find cause of blown fuse and replace fuse with same type.
		"Humidity" add-on board (Ahu) is not powered.	Check for flashing on communication LED "green" and "orange" on board, If they do not flash, use a voltmeter verify board is powered (Set to DC current). This must be +24VDC.
		Humidity" add-on board (Ahu) is not communicating with the Main card.	Check for flashing on communication LED "green" and "orange" on the board. If they do not flash, change the add-on board.
		J2 connector on Ahu “Humidity” additional board is not properly inserted into its socket, or wires are not properly connected in the connector.	Check wire connections on connector J2 of the AHU “Humidity” additional board. Verify connector screws are tight, and extension connector is properly connected to the sensor connector.
		Humidity sensor probe is defective.	Replace humidity sensor probe.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E60	Convection fan not functioning.	**NOTICE** Before resolving error E60, refer to "error history" on “Service” screen to verify no other error codes are displayed. If any are displayed, correct these errors first.	
		If it exists, fuse "Ftmv" is blown.	Check fuse Ftmv and change if required with same type fuse.
		Fuse F3 of Main board (LED 701) has blown.	Check fuse F3 on Main board. If it is blown, find cause and replace with same type fuse.
		Fuse Fm, (located in the black cylindrical fuse holder near connector J22) on Main board has blown (LED 801).	Check fuse Fm on Main board. If it is blown, find cause and replace with same type fuse.
		Fan motor thermal protection is open.	POWER OFF, check continuity of circuit between terminal A2 of connecter Kp and terminal Xb. If circuit is broken (measurement is OL), check cabling or change motor.
		Contactor Kp is not powered.	Connect voltmeter between terminals A1 and A2 of the main contactor Kp. Activate relay output Kp from "Outlets diagram" on "Service" screen. If voltage reads zero when relay is operated, check contactor Kp cabling or replace Main board.
		Contactor Kp is defective.	Connect voltmeter between terminals A1 and A2 of the main contactor Kp. Operate output Kp from "Outlets diagram" on "Service" screen. If main contactor Kp does not close when powered, replace contactor.
		Motor is not powered.	POWER OFF: Check motor connector (it is properly engaged in socket, the connections are secure, etc.). POWER ON: connect a voltmeter between the terminals Xm1 and Xm0. Operate the output switch Kp from "Outlets diagram" in the "Service" screen. If voltage is not between 208V et 240V, inspect cabling.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Motor circuit cut.	POWER OFF, check continuity of circuit between outputs S22 and S23 of Main board and terminal Xm0. If circuit is open, check cabling or change fan motor.
		Short-circuited Triac motor.	POWER OFF, measure continuity between terminals E21 and S22 on Main board. If they are short-circuited, the ohmmeter will indicate a value close to “0” Ω. If this is the case, replace Main board.
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
E70	Electronics overheat: temperature greater than or equal to 149°F.	Ambient temperature around oven too high; oven is not getting enough fresh air.	Check installation and keep away from heat-generating appliances such as open burners, hot plates. Clean air inlet perforated holes. Optional heat shield may be needed.
		Air inlets require cleaning.	Clean cool air intake vents.
		Technical fan(s) require(s) cleaning.	Clean technical fan(s).
		F3 fuse for Main board has blown.	Check F3 fuse on Main board. If it is blown, find the cause and replace fuse with same values. Refer to: MAIN BOARD FUSES. Check status of LEDs. Refer to: BOARD LEDS.
		S08 in J16 connector on Main board is defective.	Connect voltmeter between terminal S08 of Main board and Xb terminal . Activate relay output S08 from Outlets diagram on service screen. If no voltage, replace Main board.
		In electrical oven only, the output S091 in J16 connector on Main board is defective.	Connect voltmeter between terminal S091 on Main board and Xb terminal. Activate relay output S091 from Outlets diagram on service screen. If there is no voltage, replace Main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Technical fan(s) is (are) not powered.	Connect voltmeter between the terminals ventilator power supply. Activate relay output S08 then S09 (Kp) for S091 from the technical control screen (oulets). If voltage reads zero, inspect cabling. On electric's ovens only, do the same operation with the S091 output. From "Outlets diagrams in the "Service" screen, activate Kp, if voltage between terminal fan connections is "0" V, check wiring.
		Technical fan(s) is defective.	Activate relay output S08 from Outlets diagram on service screen. If fan does not turn, then replace. On electric ovens only, activate output S091, second fan must run. If it does not turn, replace it.
E71	Electronics overheat: temperature greater than or equal to 158°F.	Ambient temperature around oven too high; Extract hot air.	Check installation and keep away from appliances such as open burners and hot plates.
		Air inlets require cleaning.	Clean the cool air intake vents.
		Cooling fan requires cleaning.	Clean the cooling fan.
		Fuse F3 of the Main board has blown.	Check fuse F3 on Main board. If it is blown, find cause and replace with same type of fuse.
		Output S08 on Main board is defective.	Connect voltmeter between terminal S08 on Main board et une terminal Xb. Activate relay output S08 on technical control screen. If there is no voltage, replace Main board.
		Electrical oven only, the output S091 of the Main board is defective.	Connect voltmeter between terminal S091 on Main board and Xb terminal. Activate relay output S091 from technical control screen. If there is no voltage, replace Main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Cooling fan has no power.	Connect a voltmeter between the terminal ventilator power supply. Activate relay output S08 on technical control screen. Activate relay output S08 then S09 (Kp) for S091 from the technical control screen (oulets). If voltage reads zero, inspect cabling. If voltage reads zero, inspect the cabling.
		Cooling fan is defective.	Activate relay output S08 from the technical control screen. If fan does not turn, then replace.
E72	Electronics overheat: temperature greater than or equal to 167°F.	Ambient temperature around oven too high; Extract hot air.	Check installation and keep away from appliances such as open burners and hot plates.
		Air inlets require cleaning.	Clean the cool air intake vents.
		Technical fan requires cleaning,	Clean cooling fan.
		Fuse F3 of the Main board has blown.	Check fuse F3 on Main board. If it is blown, find the cause and replace it with a fuse of the same value.
		Output S08 of the Main (Main) board is defective.	Connect a voltmeter between the terminal S08 on the Main board et terminal Xb. Activate relay output S08 on technical control screen. If there is no voltage, replace the Main board.
		Cooling fan is not powered.	Connect voltmeter between power supply terminal of the technical fan. Activate relay output S08 on technical control screen. If no voltage, check wiring.
		Cooling fan is defective.	Activate relay output S08 on technical control screen. If the fan does not turn, then replace.
			Activate relay output S08 then S09 (Kp) for S091 from the technical control screen (oulets). If voltage reads zero, inspect cabling.
		Electrical oven only, the output S091 of the Main board is defective.	Connect voltmeter between terminal S091 on Main board and Xb terminal. Activate relay output S091 from technical control screen. If there is no voltage, replace Main board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E75 **OR** E76	Screen electronic (SoM) temperature above 176°F. The temperature of the electronics has exceeded its critical operating threshold. The oven can no longer operate.	Ambient temperature around oven too high; Extract hot air.	Check installation and keep away from appliances such as open burners and hot plates.
		Air inlets require cleaning.	Clean the cool air intake vents.
		Cooling fan requires cleaning.	Clean the cooling fan.
		Fuse F3 of the Main board has blown.	Check fuse F3 on Main board. If it is blown, find cause and replace with same type of fuse.
		Output S08 of the Main (Main) board is defective.	Connect voltmeter between terminal S08 on Main board et une terminal Xb. Activate relay output S08 on technical control screen. If there is no voltage, replace Main board.
		Electrical oven only, the output S091 of the Main board is defective.	Connect voltmeter / nonmenclature between terminal S091 on Main board and Xb terminal. Activate relay output S091 from technical control screen. If there is no voltage, replace Main board.
		Cooling fan has no power.	Connect voltmeter between power supply terminal of the technical fan. Activate relay output S08 on technical control screen. If no voltage, check wiring. Activate relay output S08 then S09 (Kp) for S091 from the technical control screen (oulets). If voltage reads zero, inspect cabling.
		Cooling fan is defective.	Activate relay output S091 from technical control screen. If there is no voltage, replace Main board.
E80	Communication fault between boards.	Degraded communications cable. OR Defective Main boards.	Replace communication wire. If the problem persists, check electronic boards.
			Test a new communication cable.
			Check Main boards and replace if needed.
E81	Break in communication between circuit boards.	Degraded communications cable. OR Defective Main boards.	Replace communication cable. If the problem persists, check electronic boards.
			Test a new communication cable.
			Check Main boards and replace if needed.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
NOTICE To reset this fault, the power supply for oven must be cut off by disconnecting the associated protection circuit breaker.			
E82	SD Card faulty.	Service configuration contains an error.	Ensure serial number, code number, cloud URL are correct.
			Replace the SD card as described in the first chapter of this document
E83	Cloud error.	Network is unaccessible.	Restore access to the Ethernet or WiFi network.
		Is network cable connected correctly?	Check network connection to the RJ45 socket on screen board. Check condition of cable using a network cable tester, replace cable if necessary.
		Wifi dongle key is incorrectly connected or faulty.	Verify Wifi key is connected to USB socket. Verify key is working properly and replace it if necessary.
		Screen board is faulty.	Replace screen board.
E90	Steam generator a fault with (E11,12,13,14,15) appeared during cycle.	E11,12,13,14,15 appeared and remained for more 3 minutes, triggering the TWIN CONTROL and automatically switching to Convection mode.	Check error history to identify original error and potential causes.
E91	Steam generator a fault with (E11,12,13,14,15) appeared during cleaning.	E11,12,13,14,15 appeared and remained for more 3 minutes, triggering the TWIN CONTROL and removing steam phases.	Check error history to identify original error and potential causes.
E92	Humidity sensor fault (E50).	E11,12,13,14,15 appeared and remained for more 3 minutes, triggering the TWIN CONTROL and removing steam phases.	Check error history to identify the original error and potential causes.
E93	Core probe fault (E30, E34).	A fault E130, E34 appeared and remained for more than 3 minutes, triggering TWIN CONTROL and removing steam phases.	Check error history to identify original error and potential causes.
I98	Started with Remaining Water Treatment Capacity at 0.	-	-
I99	Started with Number of days before service < 0.	-	-
i100	Gas Control: Speed control of a gas fan done successfully.	During preventive maintenance or any other operation requiring this check, it has been carried out successfully. Fan speed in ignition mode does not exceed +/- 20% of the setpoint value on average.	No intervention.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E101	Gas Control: Speed control of a gas fan, with speed drift/ speed issue.	During preventive maintenance or any other operation requiring this check, it has been carried out successfully. Fan speed in ignition mode does not exceed +/- 20% of the setpoint value on average.	Check rotating motor, no suspicious noises, replace gas board.
E102	E102 Gas Control: Speed control of a gas fan made, with acquisition issue.	During preventive maintenance or any other operation requiring this control, the gas board (Aag) does not detect return of the speed setpoint.	Check fan motor wiring, i.e. correct connection of speed feedback connector, correct connection of connector on gas board, wiring between these two elements, if correct, replace motor.
i103	Gas Control: Control of a burner done, with rapid ignition, OK.	If average ignition time is less than or equal to 9 seconds.	No intervention.
E104	Gas Control: Control of a burner done, with average ignition but OK.	If average ignition time is greater than 9 seconds and less than or equal to 19.5 seconds.	**CAUTION** Plan a thorough check during the next preventive maintenance cycle.
E105	Gas Control: Control of a burner done, with ignition OK but difficult.	If average ignition time is greater than 19.5 seconds and less than or equal to 30 seconds.	Check burner ignition line, gas pressure at time of sequence, condition of valve and spark box. If all is ok, disassemble burner and readjust ignition electrodes.
E106	Gas Control: Control of a burner done, with ignition OK but very problematic.	If average ignition time is greater than 30 seconds and less than or equal to 51 seconds.	Disassemble burner adjust or replace electrodes.
E107	Gas Control: Ignition failed. Safety activated.	If average ignition time is greater than 51 seconds.	See error E40 or E41.
E108	Grease collection is closed.	Grease collection valve is close.	Open the valve.
		Pressure switch is defective.	In " Technical Screen", check the status of the E1 input, contact is normally closed. If opened, check there is no overpressure in the circuit, check wiring, and if problem persists, replace pressure switch. **NOTICE** Pressure switch is set by the factory, never modify setting.
		Circuit is blocked.	Check grease flows properly, if problem, clean circuit and/or replace defective elements.

DIAGNOSTIC HELP MODULE (MAINTENANCE SCREENS)

If no error code is displayed on screen, activate diagnostic help module which consists of three separate screens. Navigate between diagrams by using the display area at the bottom of screen on all four screens in the diagnostic module.

- Inlets Diagram: Check inputs, temperatures, doors, water level, humidity, etc.
- Outlets Diagram: Comprising two screens, controls outputs, ventilation, heating, lighting, safety contactor, technical ventilation, IN valve, etc.
- Hydraulic diagram: Controls hydraulic outputs, water solenoid valves, cleaning pump, drain pump, and descaling pump.

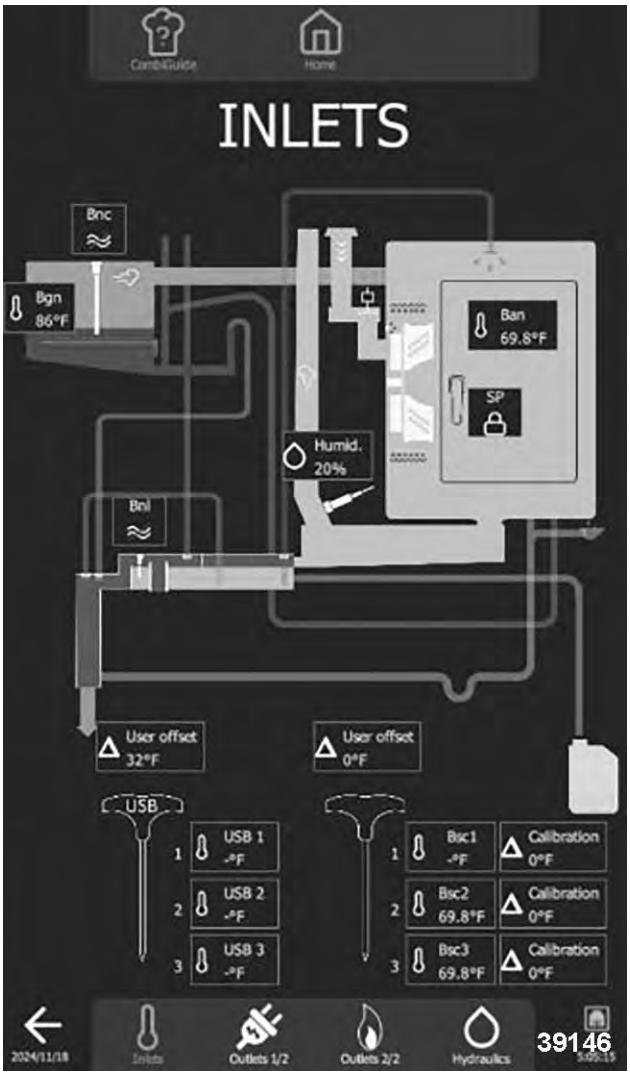


Fig. 201

INLETS		
Input	**Normal Status**	**Remarks**
Ban	Cooking Cavity Temperature	-

INLETS		
Input	**Normal Status**	**Remarks**
Sp	Door Position	Padlock Closed = Door Closed
		Padlock Open = Door Open
Bnl	Cleaning Box Level	Red line through Symbol = No Water
Bnc	Steam Generator Water Level	Red line through Symbol = No Water
Bgn	Steam Generator Temperature	-
Bsc1...3	Core Probe Temperature	-
Humid.	Humidity Rate	-

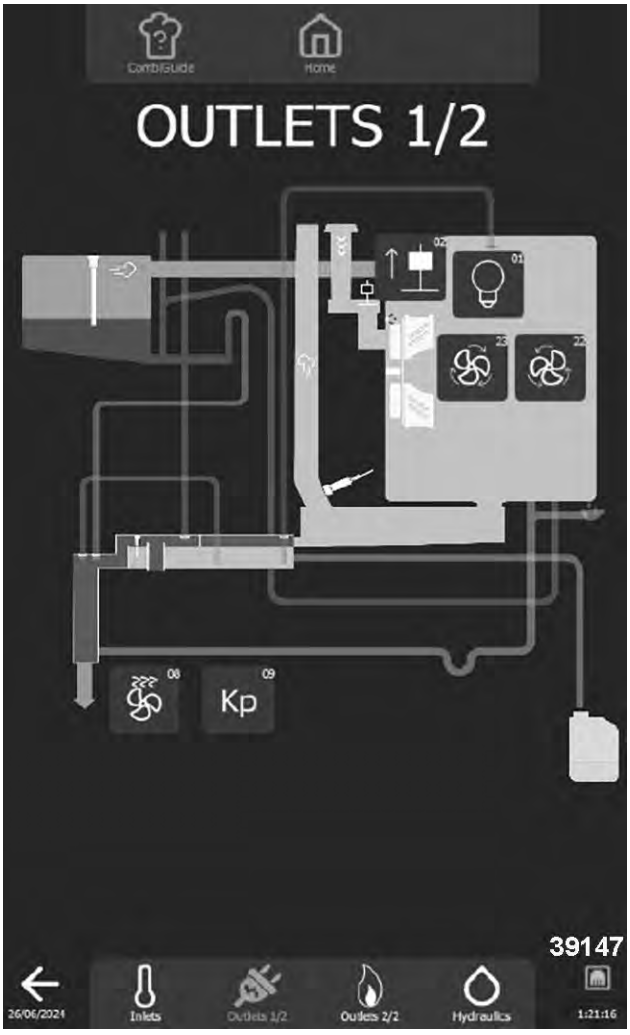


Fig. 202

OUTLETS 1/2		
No. Outlet	**Components**	**Operating**
01	LED Lighting	1 press on the button activates the lighting for 60s.
02	Vent Motor	1 press on the button activates the flapper for 60s.
08	Technical Fan	1 press on the button activates the fan for 5s.

OUTLETS 1/2		
No. Outlet	**Components**	**Operating**
09	Safety Contactor	1 press on the button activates the contactor for 1s.
22	Turbine (clockwise)	1 press on the button activates the turbine for 5s.
23	Turbine (counterclockwise)	1 press on the button activates the turbine for 5s.

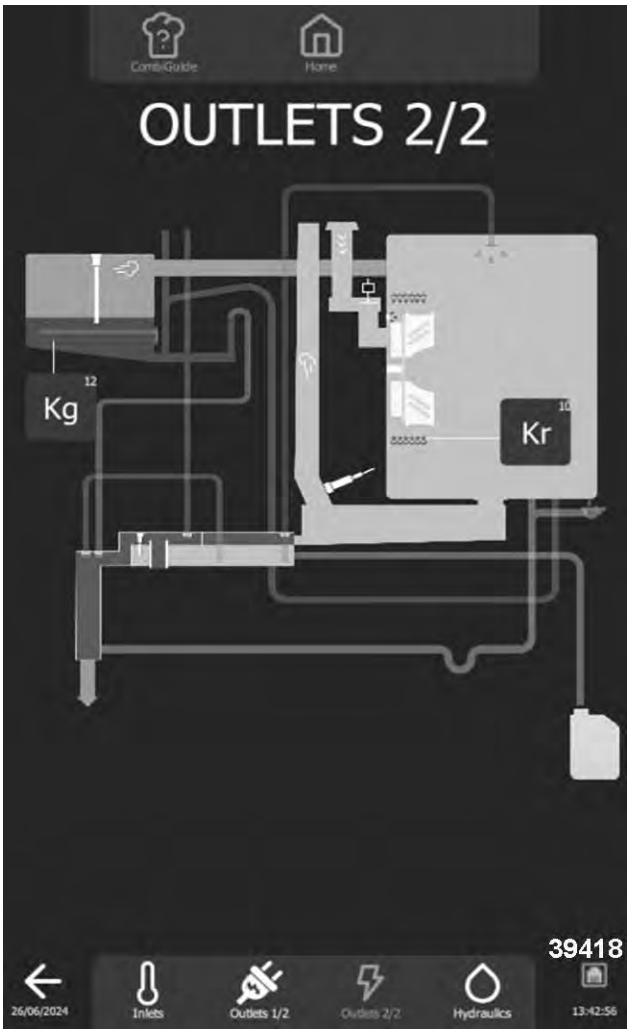


Fig. 203

OUTLETS 2/2 ELECTRIC OVENS		
No. Outlet	**Components**	**Operating**
10	Heating Contactor	1 press on the button activates the contactor for 1s.
12	Steam Generator Contactor	1 press on the button activates the contactor for 1s.

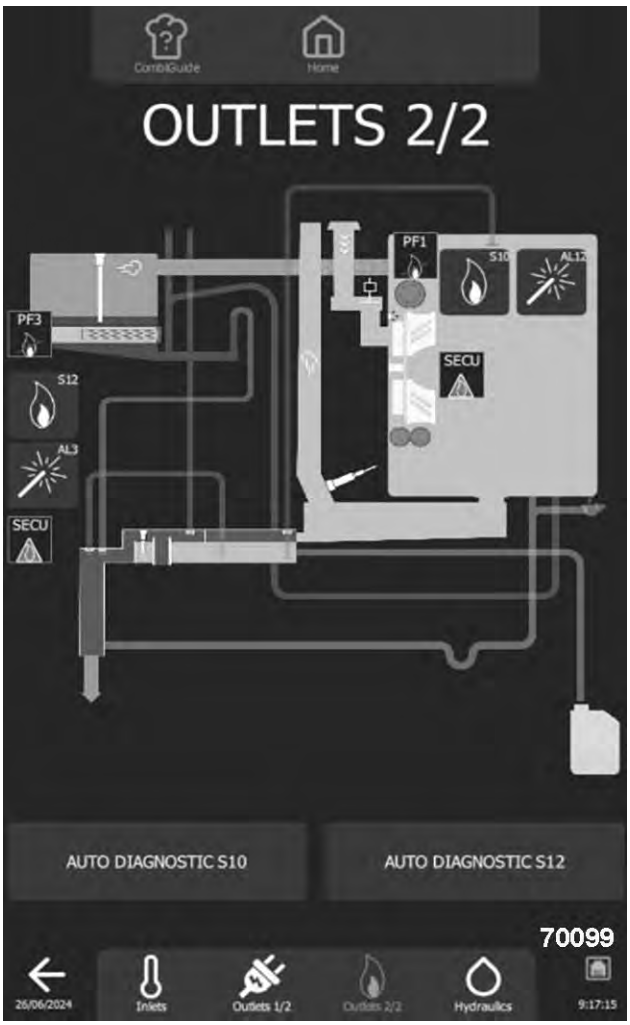


Fig. 204

OUTLETS 2/2 GAS OVENS		
No. Outlet	**Components**	**Operating**
AL12	Ignitor	1 press on the button, activates the spark box for 5s.
AL3	Steam Generator Spark Box	1 press on the key, activates the spark box for 5s.
Pf1	Burner 1 Flame Present	Crossed out: flame absent Not crossed out: flame present.
Pf2	Burner 2 Flame Present	Crossed out: flame absent Not crossed out: flame present
Pf3	Burner 3 Flame Present	Crossed out: flame absent Not crossed out: flame present
S10	Outlet S10	1 press on the button activates outlet for 10s.
S11	Outlet S11	1 press on the button activates outlet for 10s.
S12	Outlet S12	1 press on the button activates outlet for 10s.
SECU	Safety	Green: not active Red: active.

NOTICE

Check burners **BEFORE** removing using S10 / S11 / S12 buttons. The S10 / S11 / S12 burner buttons (number of burners depending on the model), will attempt to ignite the burner, resulting in correct ignition and flame detection (the corresponding PFx icon is no longer crossed out), or in a safety shutdown (the associated SECU label changes to red).

Fig. 205

AUTO DIAGNOSTIC S10, S11 and S12 buttons These buttons are used to check that the gas burner fans are operating correctly and then to make a real evaluation of the ignition quality. Even if ignition takes place, the quality will be assessed on 4 levels, from Fast (perfect), to Problematic, to Medium and Difficult. Depending on the rating, it will not be necessary to remove the burner to check electrodes and burners.

NOTE: Pressing **AUTO DIAGNOSTIC** button S10, S11 or S12 activates burner self-diagnosis module.

S10 / S11 / S12 Burner Buttons

1. Press outlet S10 or S11 (depending on the model) or S12 (depending on the type of burner to be tested) to activate burner to check.
   - For 10 seconds, outlets Ar-10 / Ar-11 or Ar-12 on the Main board closes, as well as outlets Ar-081 and Ar-09. Relay on gas board closes, initiating an ignition cycle.
2. Repeat Step 1 if fails.
   - If burner PF1 / PF2 or PF3 sticker is no longer crossed out, and associated SECU sticker stays green, this indicates the system is operating correctly.
   - Check HEATING ELEMENT (spark box, gas board, etc.).
3. Repeat Step 1 again for a third time, if fails.
   - If burner PF1 / PF2 or PF3 sticker is no longer crossed out, and associated SECU sticker changes to red, this indicates the system isn't operating correctly.
   - Dismantle burner and clean and/or adjust electrodes.

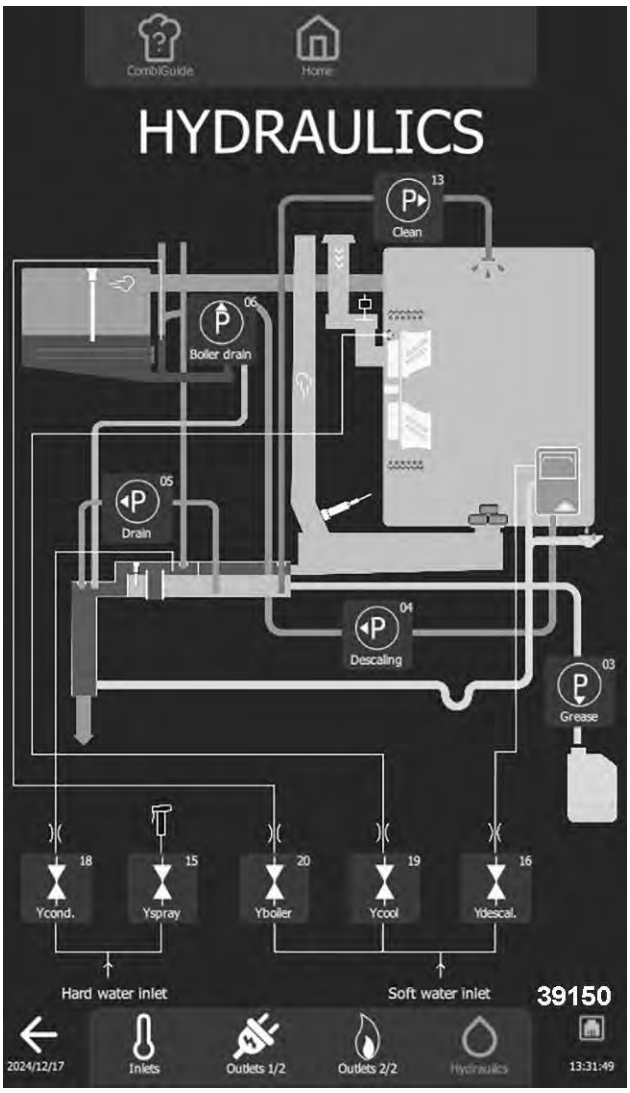


Fig. 206

NOTE: Pressing a button activates a timer. Duration of which may vary according to the element being controlled. Time delay can be cancelled by pressing the same button again.

HYDRAULICS		
No. Outlet	**Components**	**Operating**
P-13	Cleaning Pump	1 press on the button activates the pump for 5s.
P-06	Steam Generator Drain Pump	
P-05	Cleaning Box Drain Pump	
P - 04	Descaling Pump	
P - 03	Grease Collection Pump (optional)	
Ycond. - 18	Condenser Solenoid Valve	1 press on the button activates the solenoid valve for 60s.
Yspray - 15	Spray Solenoid Valve	
Ysteam generator - 20	Steam Generator Solenoid Valve	
Ycool - 19	Cooling Solenoid Valve	

HYDRAULICS		
No. Outlet	**Components**	**Operating**
Ydescal. - 16	Descaling Solenoid Valve	

OVEN TROUBLESHOOTING

SYMPTOM	CAUSE	POSSIBLE SOLUTION
The oven is not working the display is off.	Supply voltage is not present at the device terminals	Check power cord condition and all the connection points, make any needed corrections.
	Oven circuit breaker is not switched on.	Switch circuit breaker on or have it switched on. If it trips again, verify appliance is properly insulated; leakage currents must be less than 30mA.
	System voltage is not present at the Ar Main board terminals.	Check voltage at terminals 1 and 2 of connector J18 (refer to the electronic diagram in this manual). If there is no voltage, disconnect connector J18: • If voltage is present again, replace the Main board, • If voltage is still absent, verify power supply (Tc). Verify Its correct operation is indicated by a green LED; if necessary, replace power supply.
	Molex connector link cable between Main board and the screen is faulty.	Verify voltage is present. Check communication LEDs (see LED assignment section in this document). If the problem persists, replace the cable.
	Screen is faulty.	If the problem persists, replace the screen.
	Short-circuit at switching power supply output.	LEDs (switching power supply, red LEDs on the Main board) are flashing. Disconnect cable between the interface board and encoder board.
	Encoder inoperative, LED ring does not light up.	Verify it is correctly connected and operating correctly. If problem persists, replace encoder board.
Screen inoperable, system won't start, random malfunctions, difficulty updating.	Loss of communication.	Refer to the "screen inoperable or blocked" flowchart in this manual.
Display on, oven not working.	An error code displayed (blocking message).	Refer to: ERROR CODES
	The oven door is not closed properly.	Make sure oven door is correctly locked.

SYMPTOM	CAUSE	POSSIBLE SOLUTION
	The switch does not detect when the oven is closed.	Check status of the door closing position switch in the technical panel, if the output remains at "0": On Main board (Aar), verify J5 connector is correctly connected to its socket, verify contact closes when the door is closed and that it is correctly fitted mechanically. If the problem persists, adjust door and replace switch if necessary.
Electric Ovens Only The screen is lit, the oven works but the lighting does not.	One of more heating elements are not working.	Refer to "electric heater fault" diagram in this document.
Gas Ovens Only Burner does not light.	Spark box does not work.	Refer to: SPARK BOX FAULT diagram in this document.
	Gas fan not working.	Check fan power supply at terminal 2 of Kbg or Kbr and Xb. • If 230VAC present, replace fan. • If there is no 230VAC, verify Kbg or Kbr contactor is switched on, check connections and tighten screws, etc.
	No gas or too low pressure.	Verify gas entering oven is of correct type and pressure.
	The gas valve does not work.	Check resistance of 848 Sigma gas solenoid valve coils Ev1 (terminals 4-3) and Ev2 (terminals 1-3); • If resistance is greater than 0, check gas pressure at valve inlet and burner heating demand; if burner does not ignite, replace valve, • If resistance is equal to 0, replace valve.
	The ionization electrode does not detect the flame.	Check electrode (see electrode adjustment section of this manual).
	The flame control box does not work.	Turn off the gas supply and start cooking, if at end of ignition sequence: • "Gas error" fault appears, the flame control box is operational, proceed with the above checks. • If error does not appear, replace flame control box.

SYMPTOM	CAUSE	POSSIBLE SOLUTION
Gas Ovens Only Noisy burner.	Gas settings are incorrect or wrong gas is being connected.	Verify technician parameters that gas selected corresponds to what is indicated on the oven identification plate. Verify gas supplied to oven matches what is indicated on oven identification plate.
	Gas valve incorrectly set.	Verify CO2 level.
	Air supply problem.	Verify air inlet tube is correctly connected, and not obstructed.
	Silicone venturi valve connection tube is disconnected or faulty.	Verify tube is correctly connected. If problem persists, replace valve.
Loud ignition on starting gas burner.	Ignition electrode is incorrectly adjusted.	• Verify electrode settings: insulation of wires in relation to ground (stray sparks). Verify electrode soapstone on electrode is not broken. • Perform STEAM GENERATOR & CORE/CAVITY PROBE CALIBRATION.
Polluting burner.	Gas settings are incorrect or wrong gas is being connected.	Verify technician parameters that gas selected corresponds to what is indicated on the oven identification plate. Verify gas supplied to oven matches what is indicated on oven identification plate.
	Gas valve incorrectly set.	Check status of LEDs on gas board. • If off, verify gas board is connected to the Main board (rear connector, condition of connections). • Verify gas board mounting screws are secure to the Main board. • If lit, check various connections (screwing and fixing connectors to their sockets) from gas board to fan.
Burner emits a random whistling sound.	When oven is cold, a hissing sound may be heard.	Should disappear quickly as burner heats up. If problem persists, check air intakes for obstructions.

SYMPTOM	CAUSE	POSSIBLE SOLUTION
Spark box works continuously.	Presence Flame (PF) does not return.	Fault between gas box and gas card connection. Verify wires and connections are secure. Fault between gas board and main board connection. Check state of LEDs on gas board, verify rear connection between gas board and main board. Verify gas board screws and connections are secure to Main board, if problem persists, replace gas board.
Pump whistles.	Air in circuit.	Check circuit for leaks (connections, hoses, etc.).
	Defective bearings.	Verify flow rate.

OVEN SCREEN INOPERATIVE OR BLOCKED

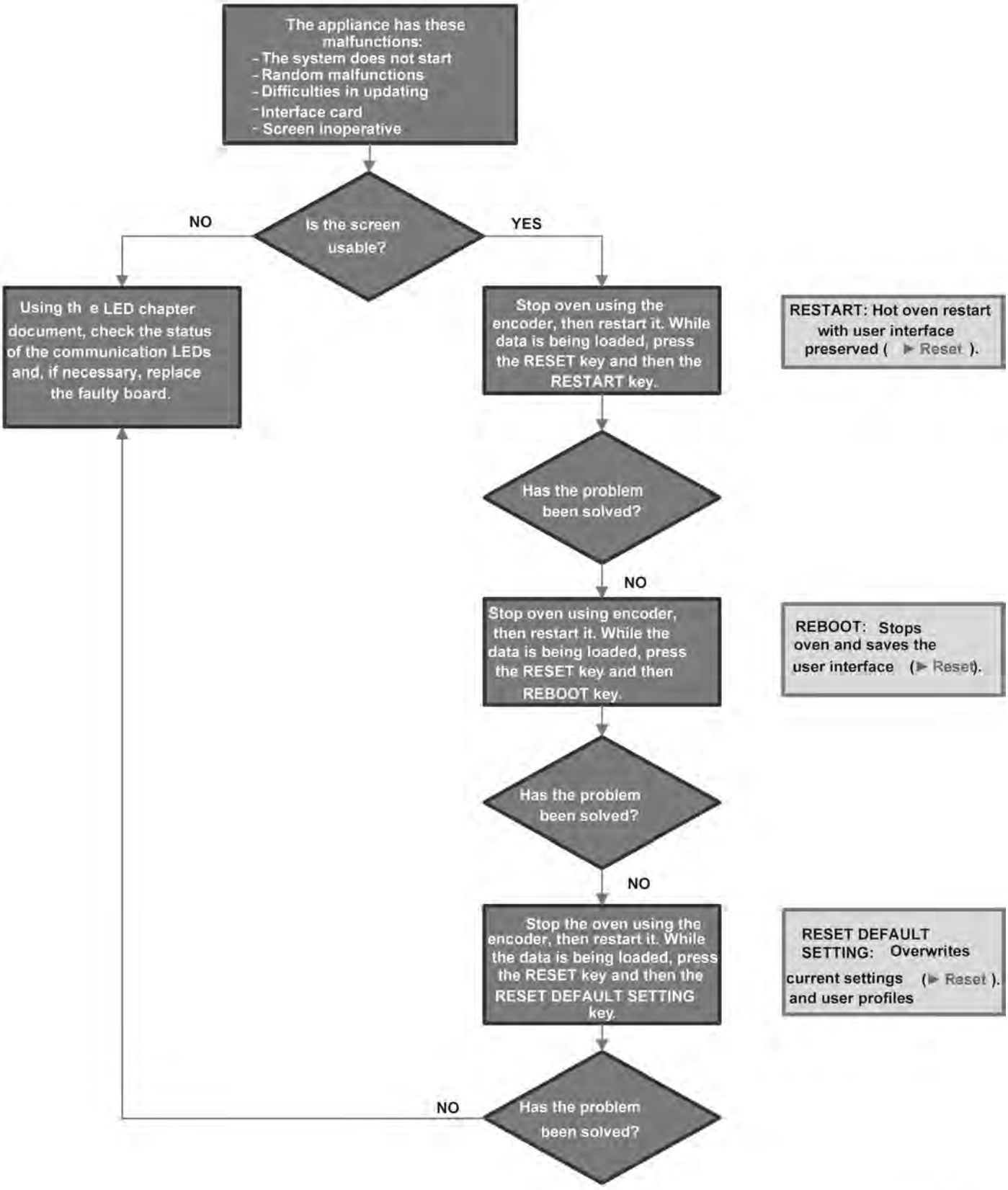
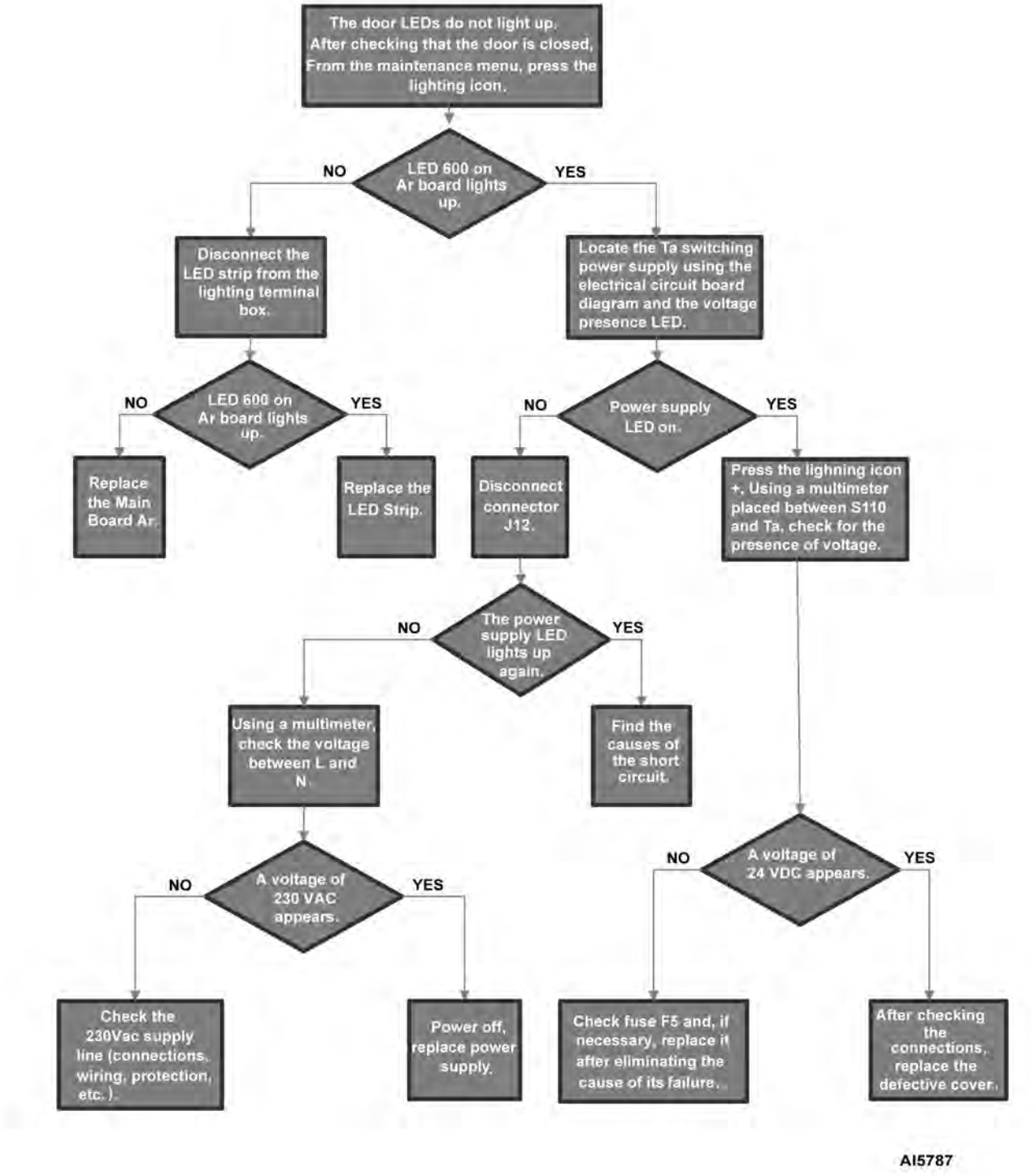


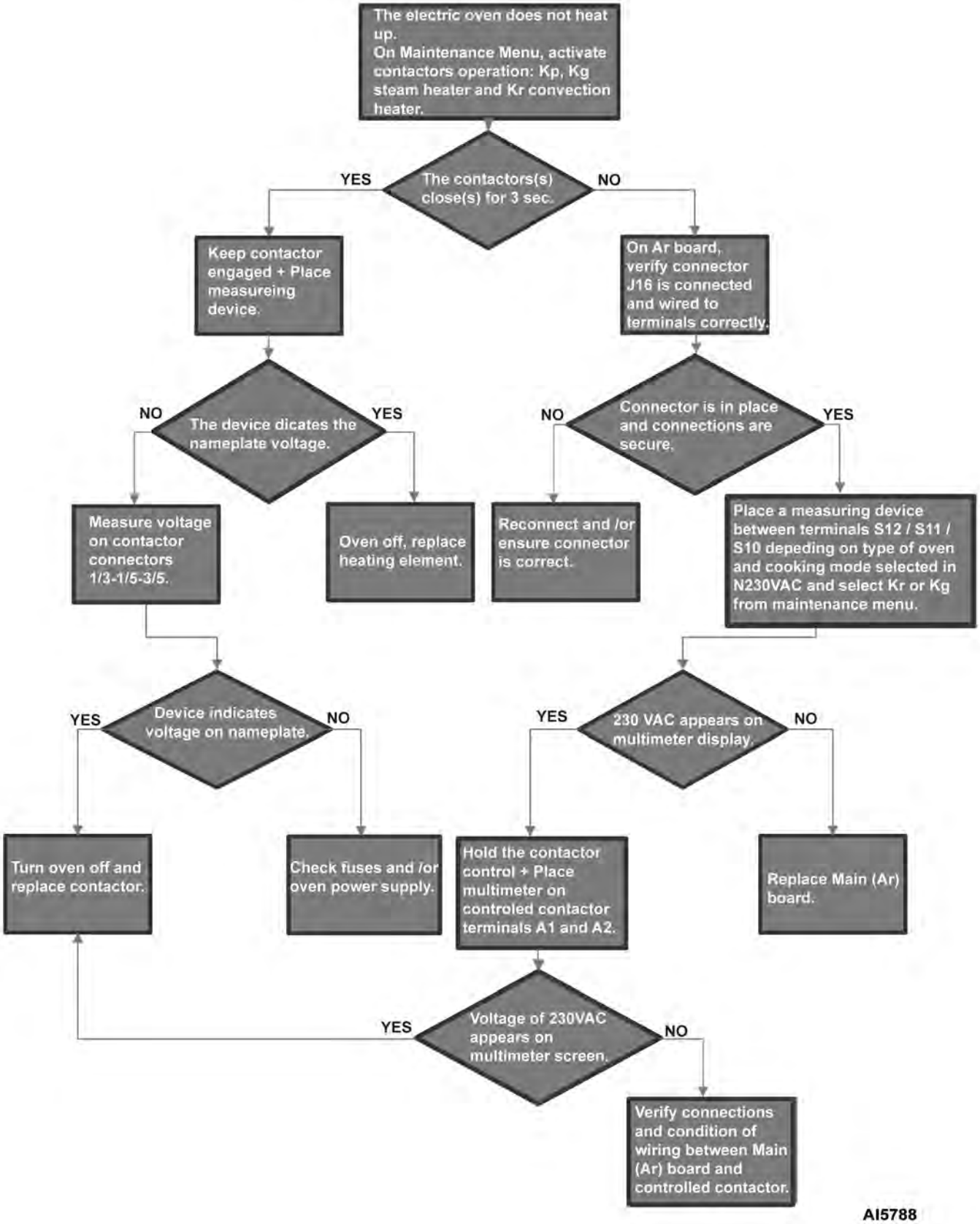
Fig. 207

AI5786

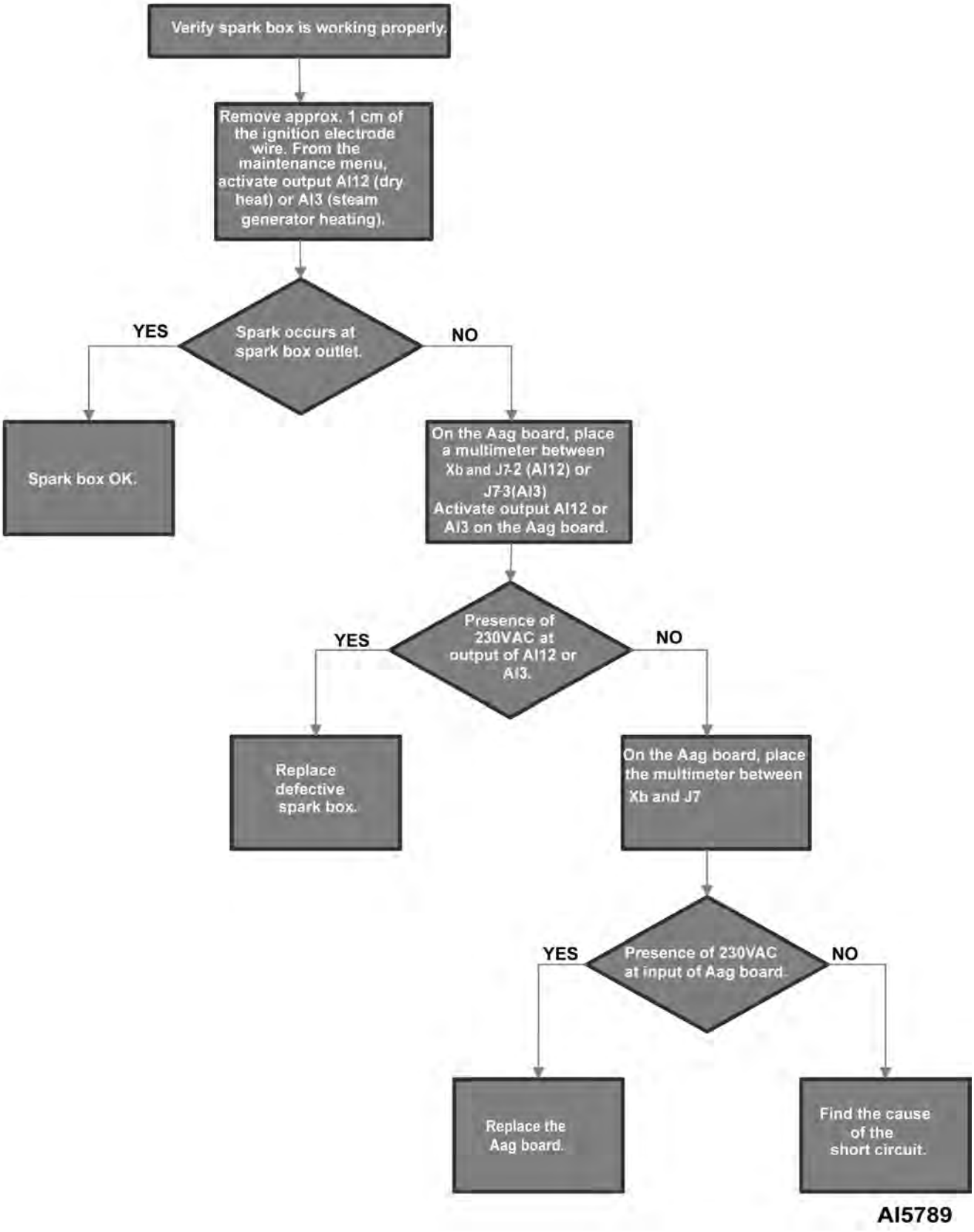
OVEN LIGHTING FAULT OF COOKING CAVITY



ELECTRIC HEATER FAULT



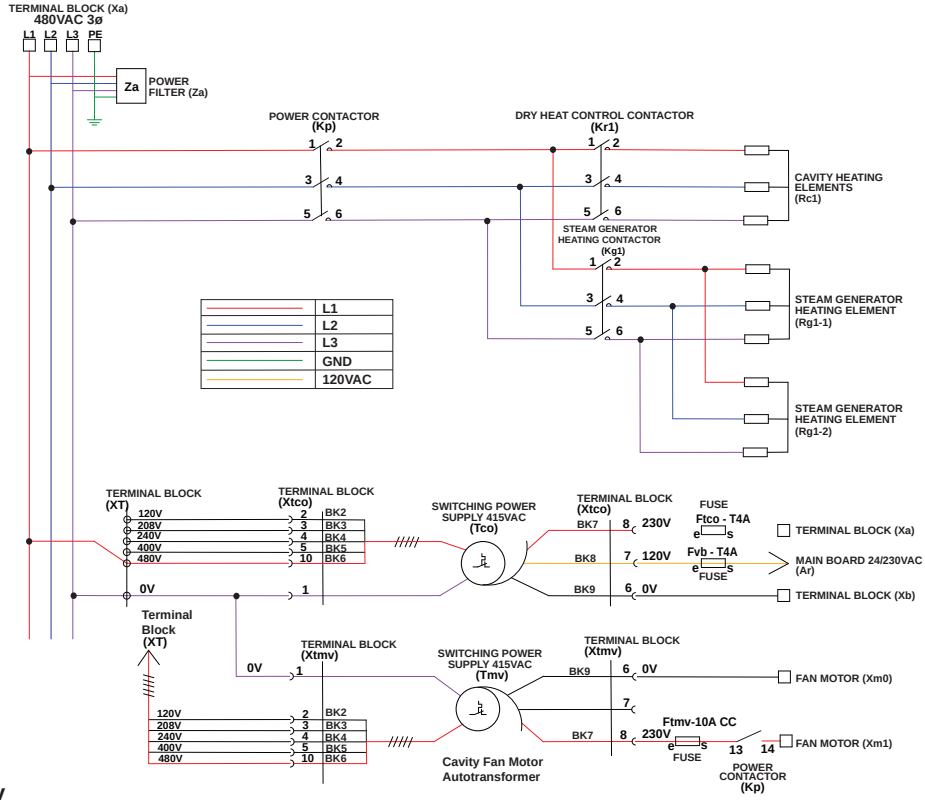
SPARK BOX FAULT



GAS - AUTO DIAGNOSTICS

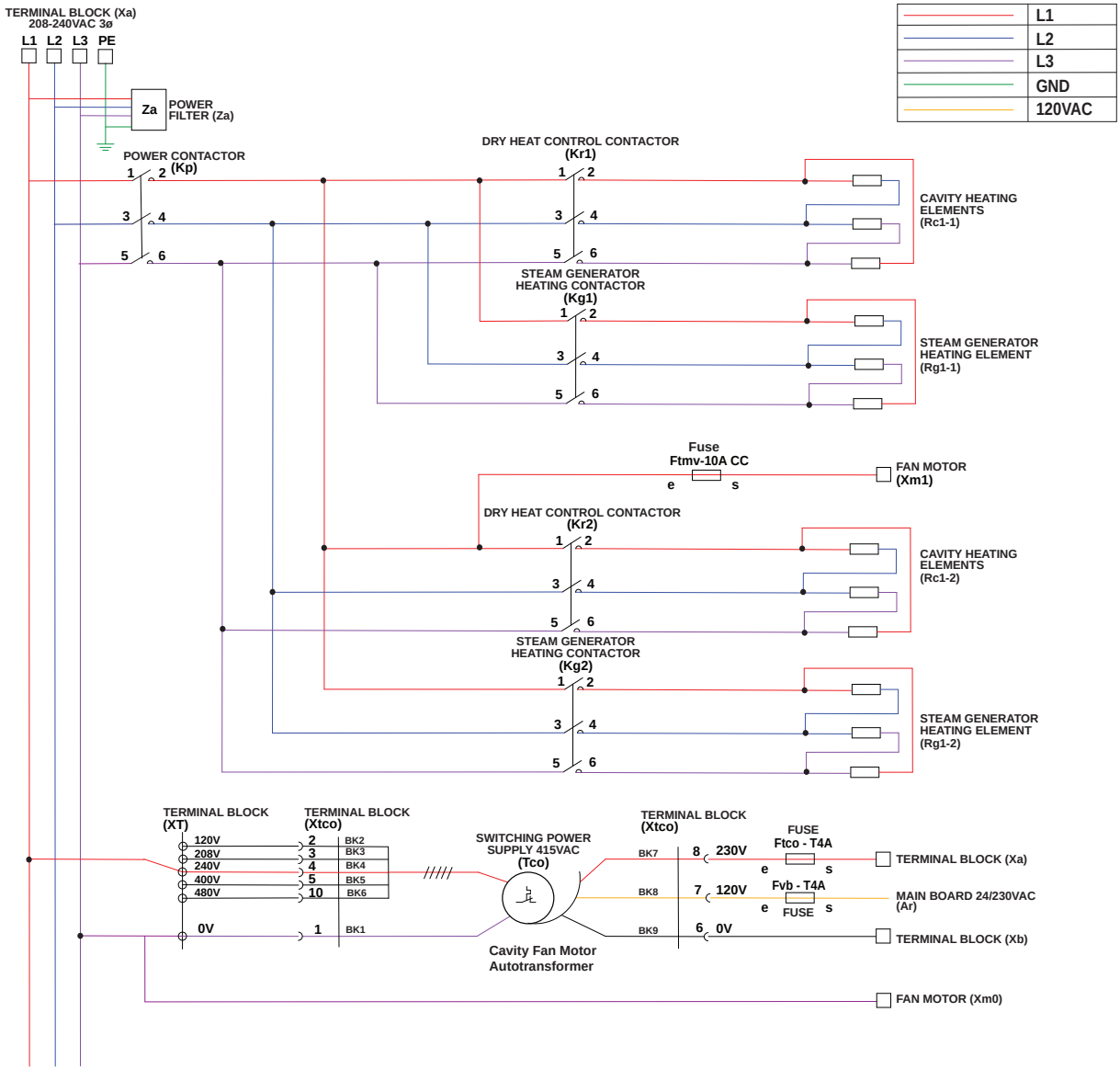
AUTO DIAGNOSTIC S10, S11 and S12: These buttons are used to verify gas burner fans are operating correctly and to perform evaluation of the ignition quality.

Even if ignition takes place, the quality will be assessed on 4 levels, from Fast (perfect), to Problematic, to Medium and Difficult. Depending on the rating, it will not be necessary to remove burner to check the electrodes and burners.



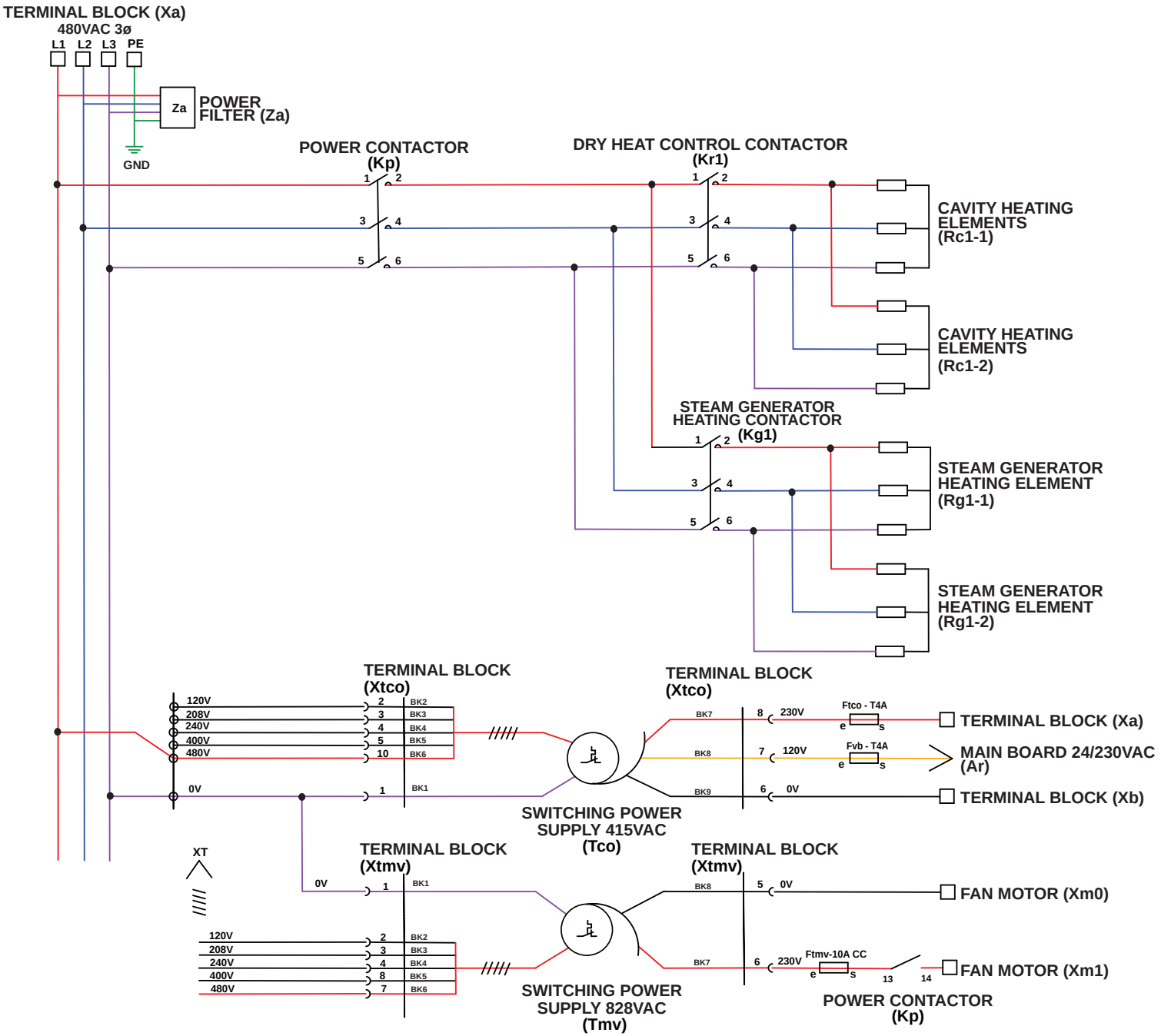
CHEF Combi 480V
DERIVED FROM Puissance_Power_61E- 480V Rev B (01/23/26)

AI5798



CHEF Combi 62E & 101E

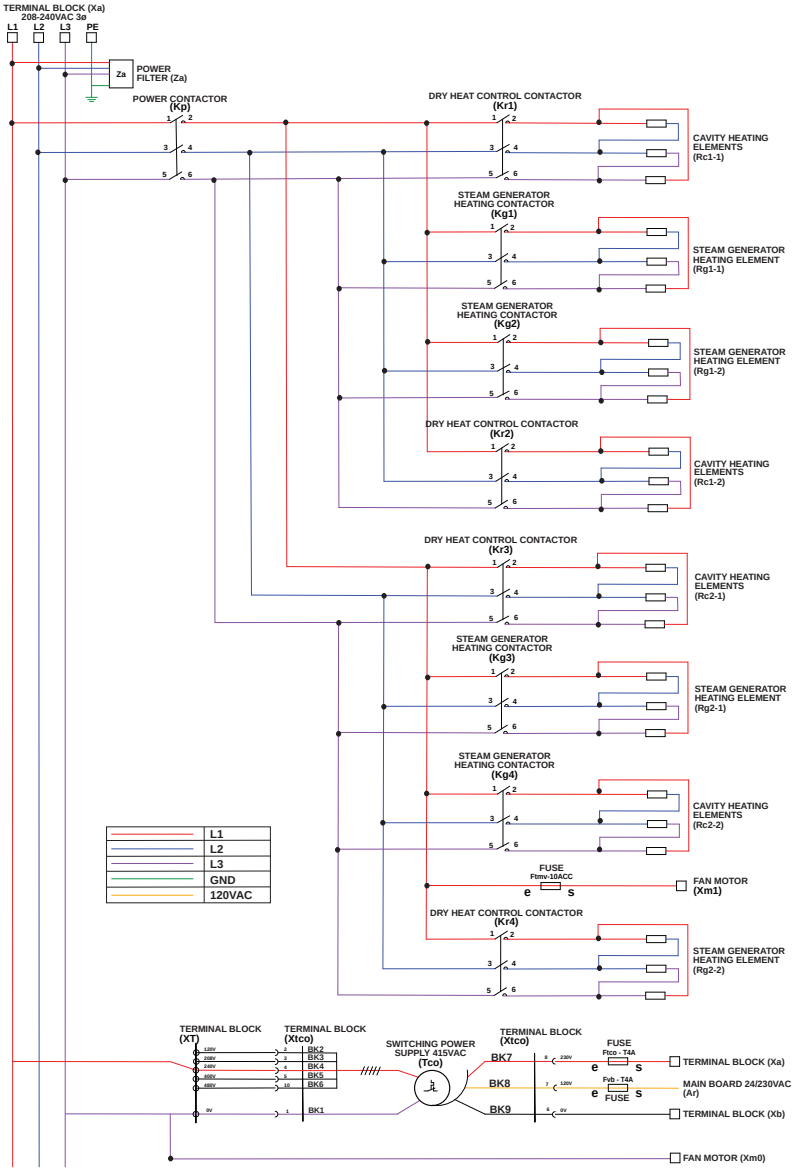
DERIVED FROM Puissance_Power_62E- & 101E 208V & 240V Rev B (01/23/26) **AI5796**



	L1
	L2
	L3
	GND
	120VAC

CHEF Combi 62E & 101E
DERIVED FROM Puissance_Power_62E-480V Rev B (01/23/26)

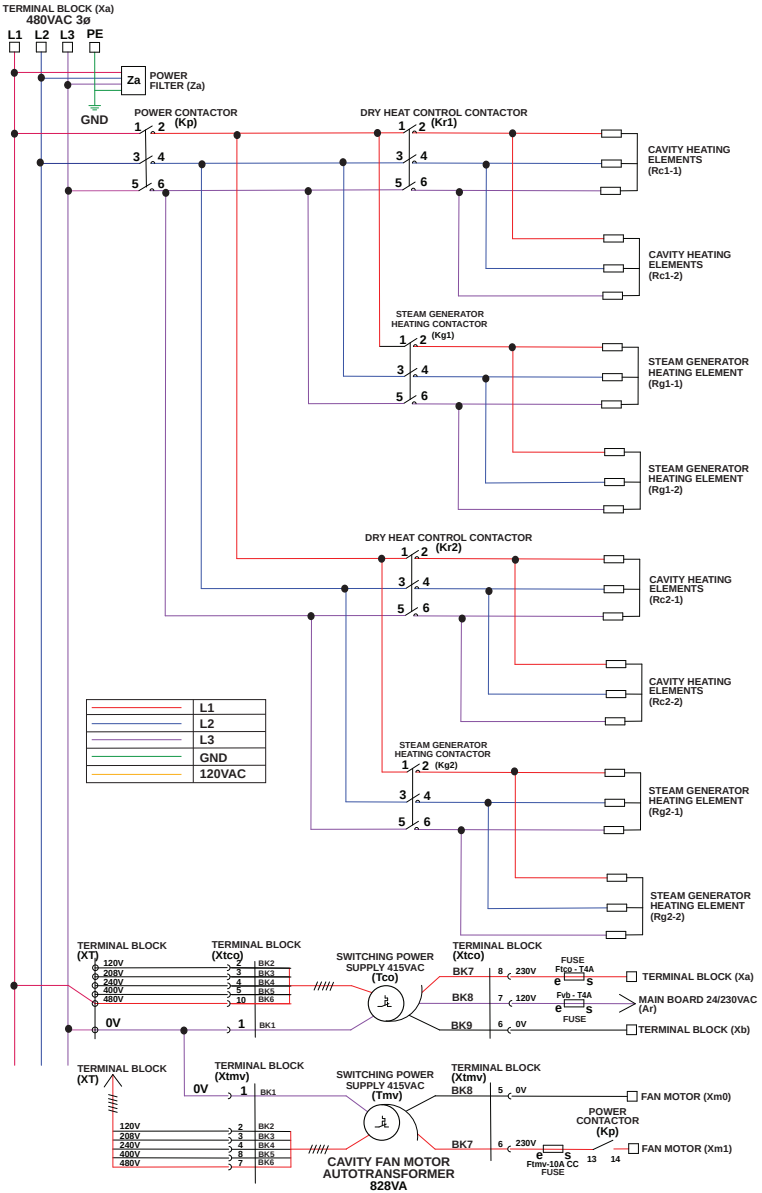
AI6008



CHEF Combi 102E

DERIVED FROM Puissance_Power_102E-208V & 240V-UL Rev B (01/23/26)

AI6010



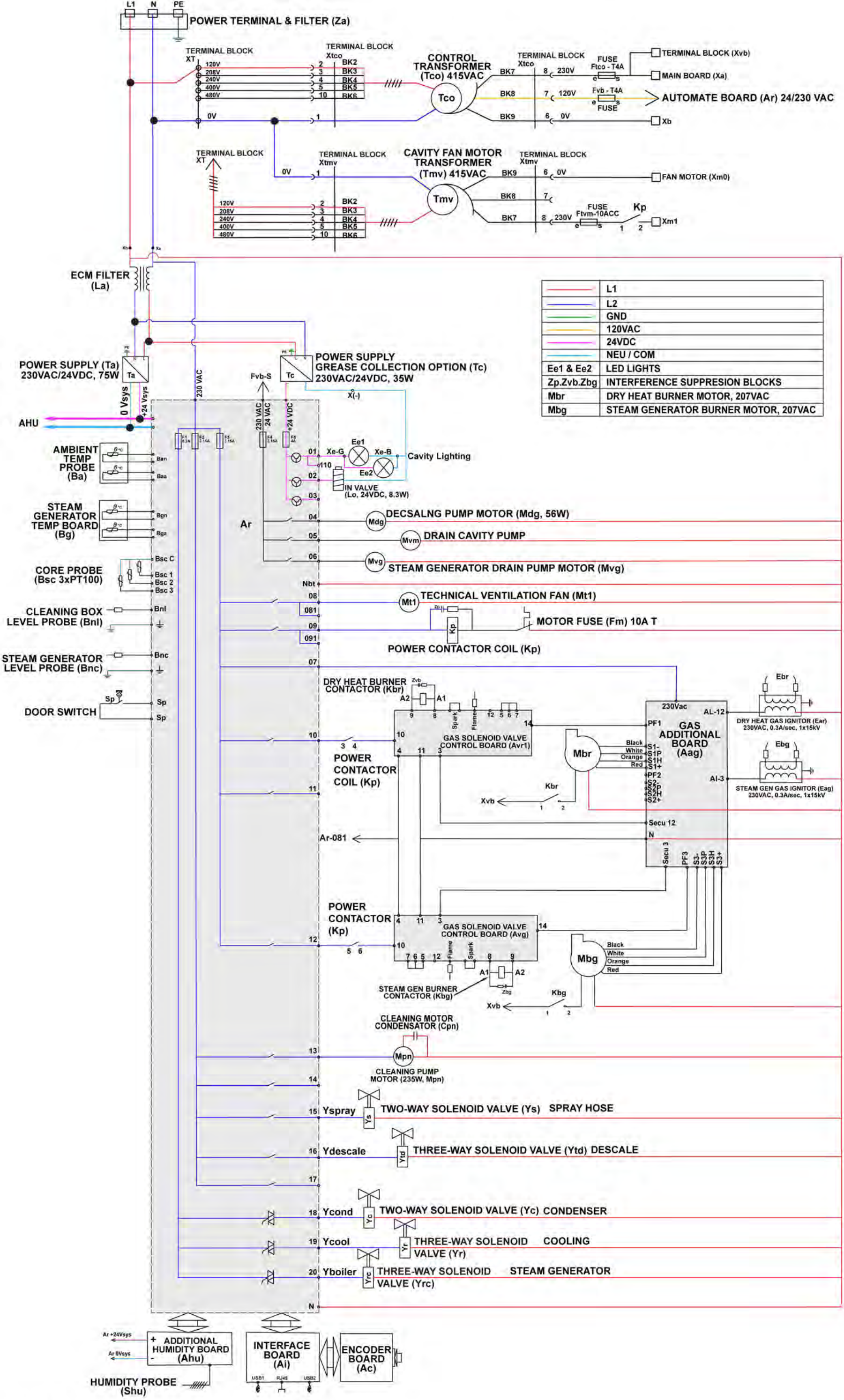
CHEF Combi 102E - 480V

DERIVED FROM Puissance_Power_102E-480V Rev B (01/23/26)

AI5795

	L1
	L2
	GND
	120VAC
	24VDC
	NEU / COM
Zp / Zr / Zg	INTERFERENCE SUPPRESION BLOCKS
Mbr	DRY HEAT BURNER MOTOR, 207VAC
Mbg	STEAM GENERATOR BURNER MOTOR, 207VAC
Kg	Kp - STEAM GENERATOR CONTACTOR (Kg)
Kr	Kr - CONVECTION CONTACTOR (KrT)
Kp	Kp - POWER CONTACTOR (Kp)

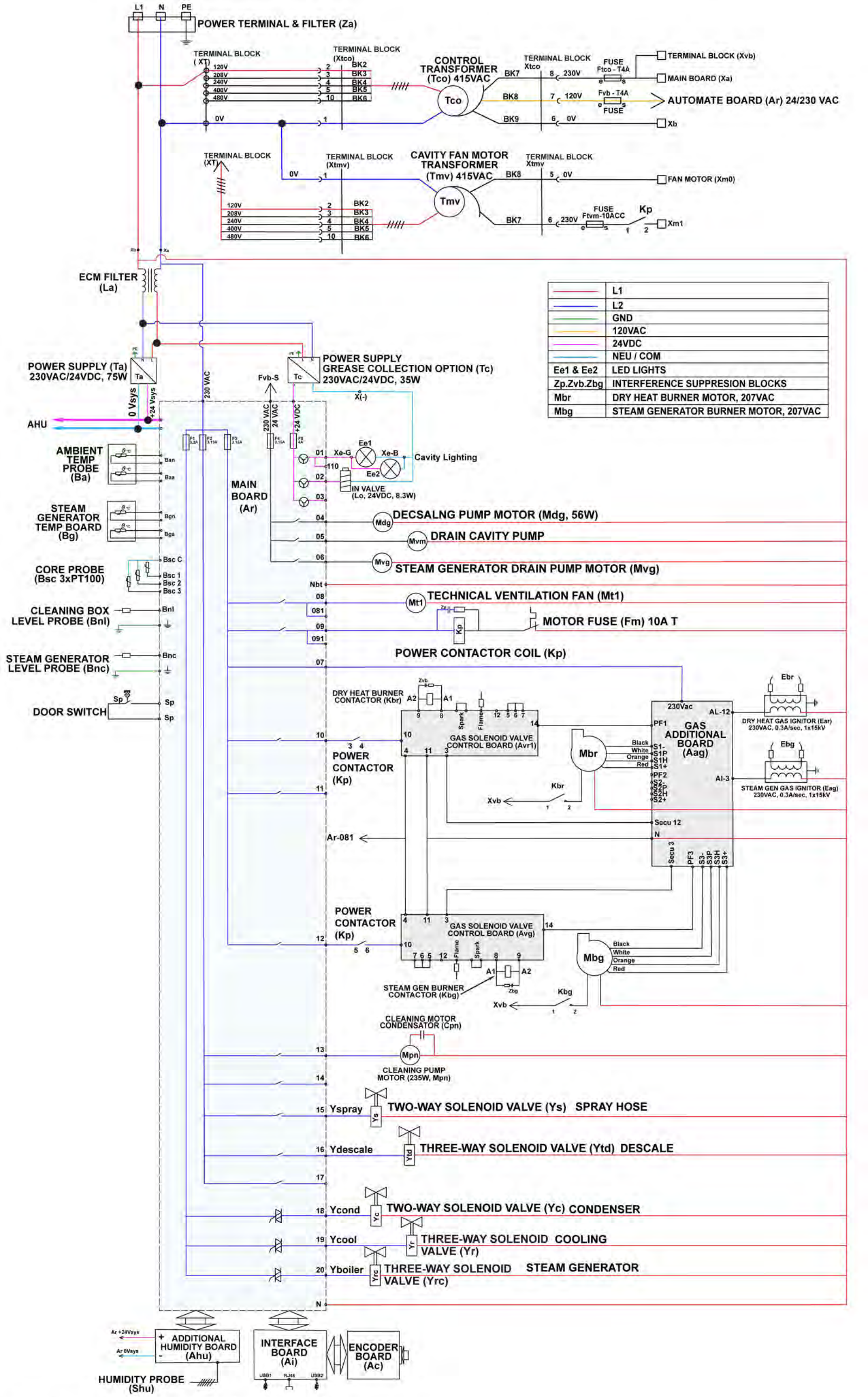
Xb
Xa
EMC FILTER (La)
PE
SWITCHING POWER SUPPLY (Ta 75 W)
N L
- + +24VDC
AHU
0 Vsys
Fvb-s 120 V
PE
L N
SWITCHING POWER SUPPLY (Ta 35 W)
+ -
X(-)
230 VAC
230 VAC 24 VAC
+24 VDC
F1 0.2A
F2 3.15A
F3 3.15A
F4 3.15A
F5 4A
AMBIENT PROBE (Ba)
°C
Ban
Baa
STEAM GENERATOR TEMPERATURE PROBE (Bg)
Bgn
Bga
CORE PROBE (Bsc 3xPT100)
Bsc Com
Bsc 1
Bsc 2
Bsc 3
CLEANING BOX LEVEL PROBE (Bnl)
Niveau d'eau boite de lavage
Bnl
STEAM GENERATOR LEVEL PROBE (Bnc)
Niveau d'eau chaudière
Bnc
DOOR SWITCH (Sp)
Sp
Sp
MAIN BOARD (Ar)
01
110
LED STRIP (Ee1)
Xla-G
Xla-B
LED STRIP (Ee2)
CAVITY LIGHTING
02
IN VALVE (Lo)
03
04
Mdg
DESCALING PUMP MOTOR (Mdg)
05
Mvm
DRAIN CAVITY PUMP (Mvm)
06
Mvg
STEAM GENERATOR DRAIN MOTOR (Mvg)
Nbt
08
TECHNICAL VENTILATION MOTOR (Mt1)
Mt1
081
Interference Suppressor (Zp)
09
Kp
MOTOR FUSE (Fm)
POWER CONTACTOR
091
TECHNICAL VENTILATION MOTOR (Mt2)
Mt2
10
Zr
Kr
Interference Suppression Blocks
CONVECTION HEATING CONTACTOR
11
12
Zg
Kg
Interference Suppression Blocks
STEAM GENERATOR HEATING CONTACTOR
13
Cpn
Mpn
CLEANING PUMP MOTOR (Cpn)
14
15
Yspray
Ys
TWO-WAY SOLENOID VALVE (Ys)
SPRAY HOSE
16
Ydescale
Yde
Ytd
THREE-WAY SOLENOID VALVE (YtdV)
DESCALING
17
18
Ycond
Yc
TWO-WAY SOLENOID VALVE (Yc)
CONDENSER
19
Ycool
Yr
THREE-WAY SOLENOID VALVE (Yr)
COOLING
20
Yboiler
Yrc
THREE-WAY SOLENOID VALVE (Yr)
STEAM GENERATOR
N
Ar +24Vsys
Ar 0Vsys
+
-
ADDTIONAL HUMIDITY BOARD (Ahu)
HUMIDITY PROBE (Shu)
INTERFACE BOARD (Ai)
USB1
RJ45
USB2
ENCODER BOARD (Ac)



CHEF Combi 61/101 Gas Oven Schematic

DERIVED FROM Principe_Schematic - GAS Rev B (1/23/26)

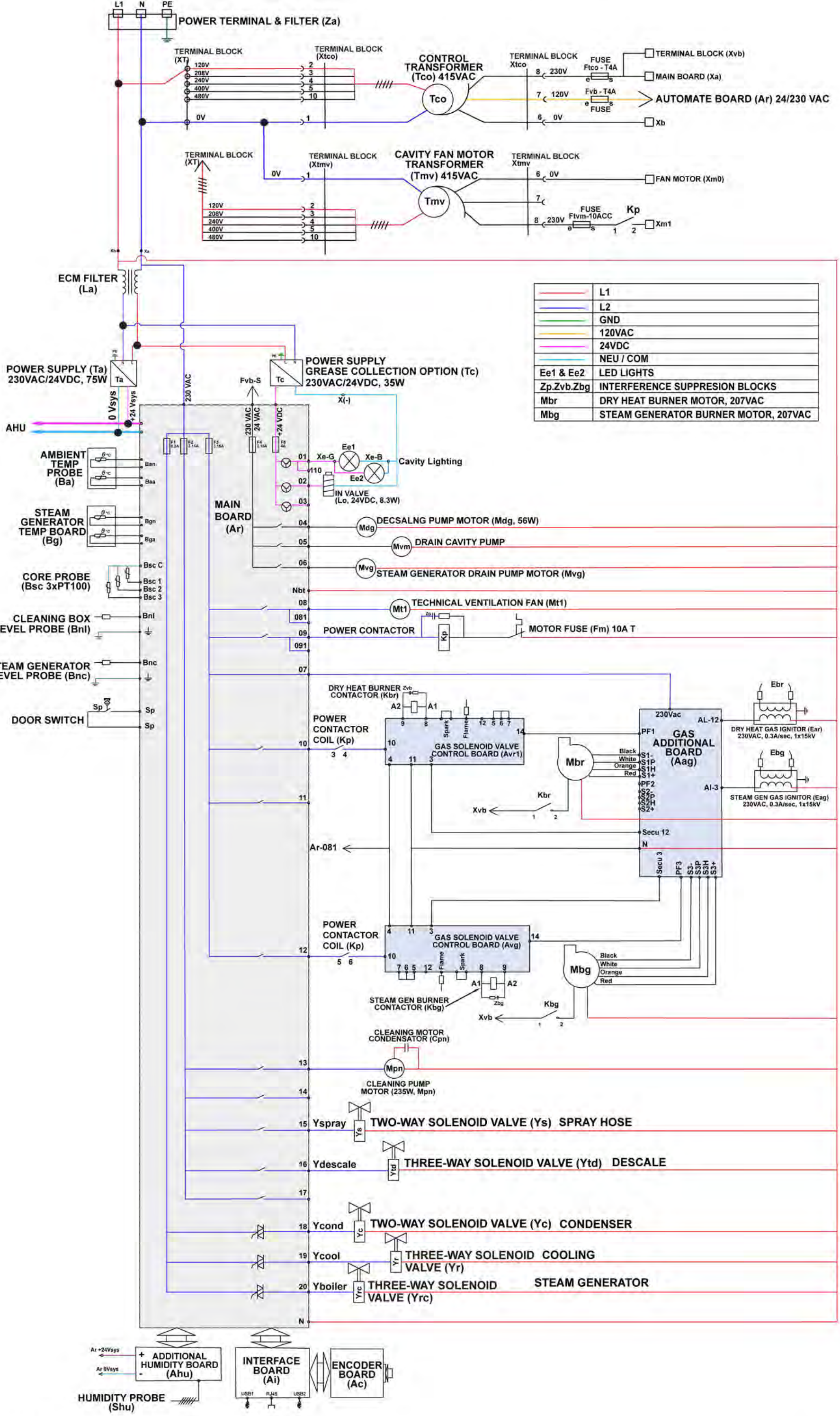
AI6002



CHEF Combi 62/102 Gas Oven Schematic GAS

DERIVED FROM Principe_Schematic - GAS Rev B (1/23/26)

AI6173



CHEF Combi Schematic GAS

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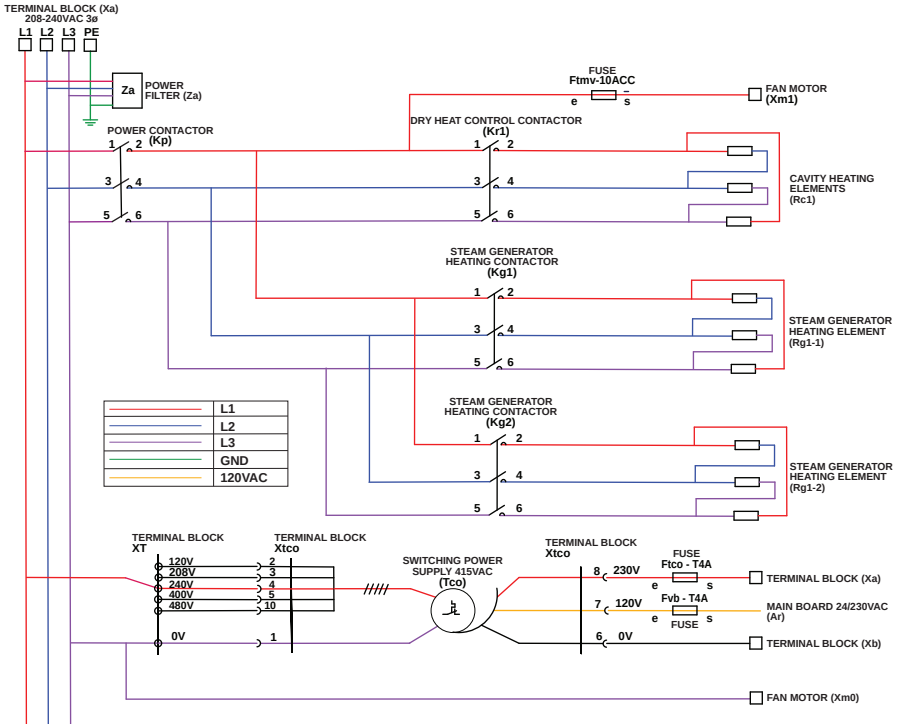

CHEF Combi 61E
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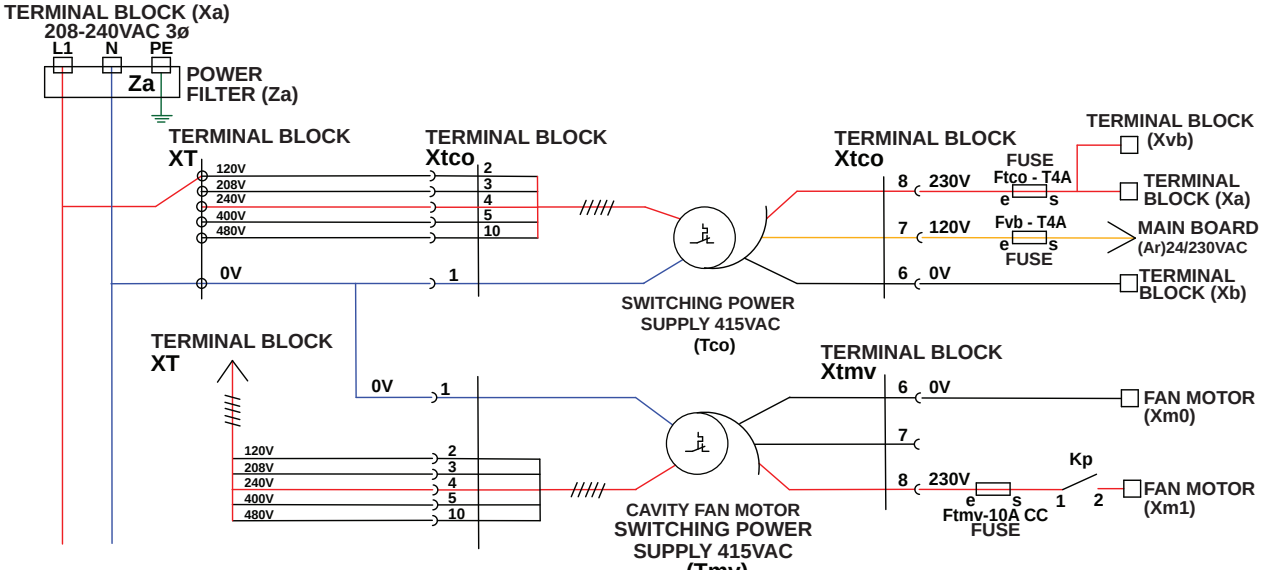
AI5799



	L1
	L2
	L3
	GND
	120VAC

CHEF Combi 61G & 101G
DERIVED FROM Puissance_Power_61G & 101G - 230V Rev A

AI5797