SERVICE MANUAL

GAS AND ELECTRIC CHEF'S COMBI OVENS

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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1. GENERAL

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

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.

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.

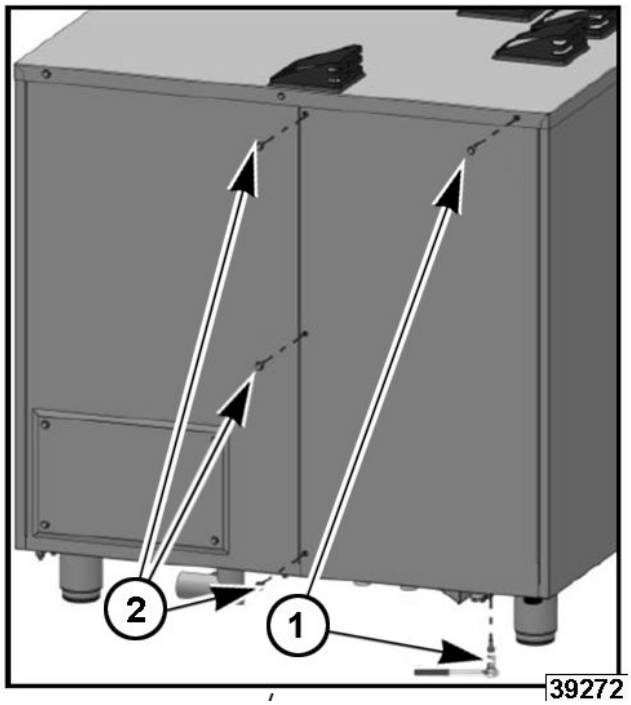


Fig. 5

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

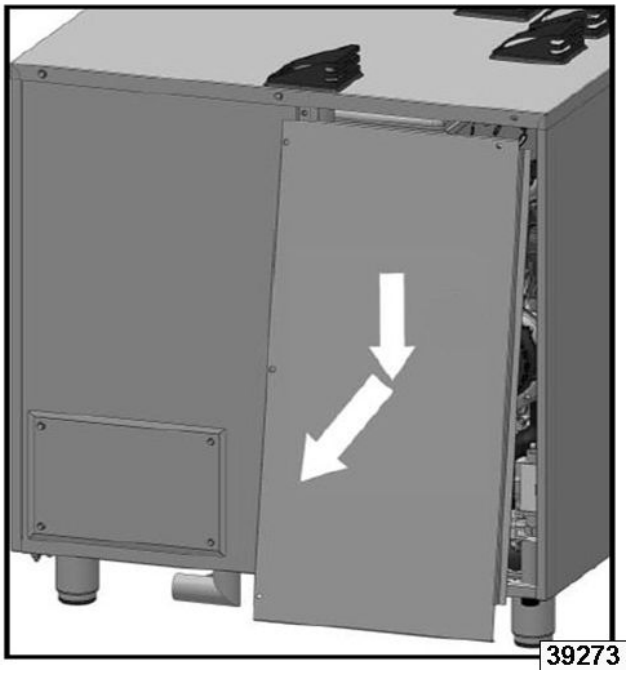


Fig. 6

4. Reverse procedure to install.

GREASE COLLECTION HATCH COVER (OPTIONAL)

1. Remove hatch cover mounting screws.

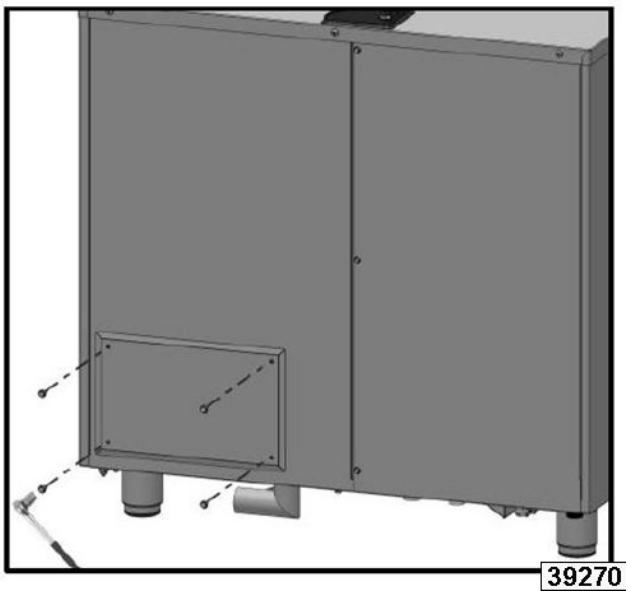


Fig. 7

2. Remove hatch cover.

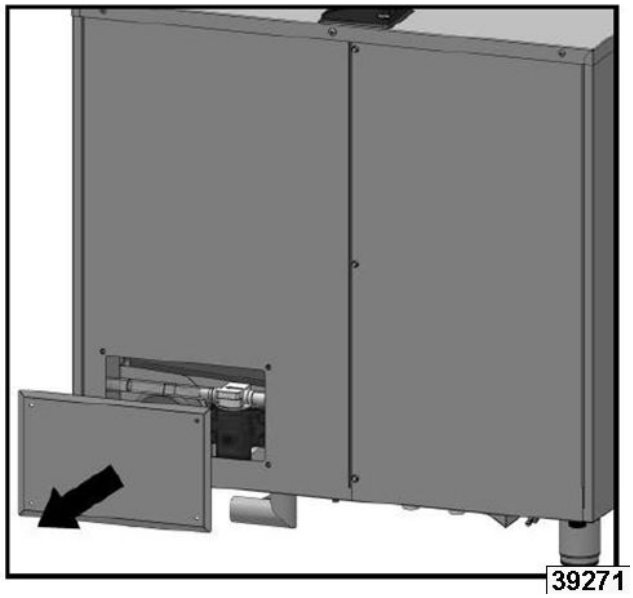


Fig. 8

3. Reverse procedure to install.

ACCESS BEHIND MAIN BOARD MOUNTING BRACKET

⚠ 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).

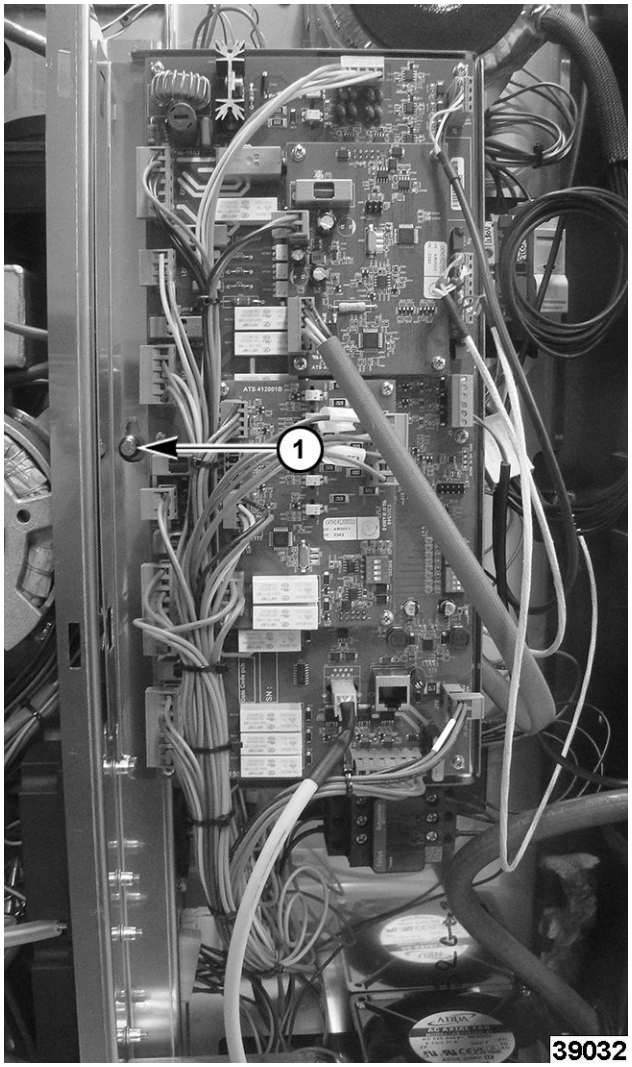


Fig. 9

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

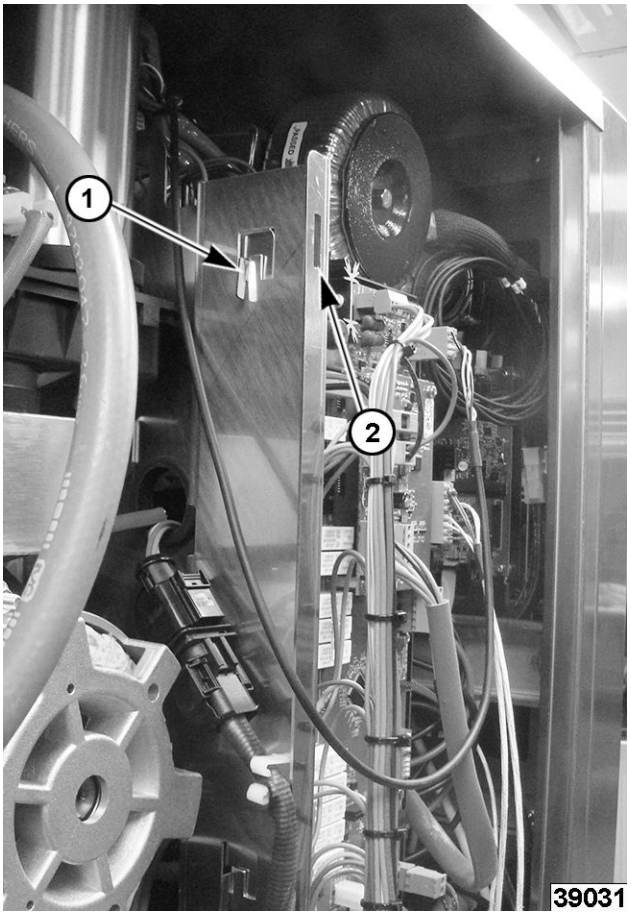


Fig. 10

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.

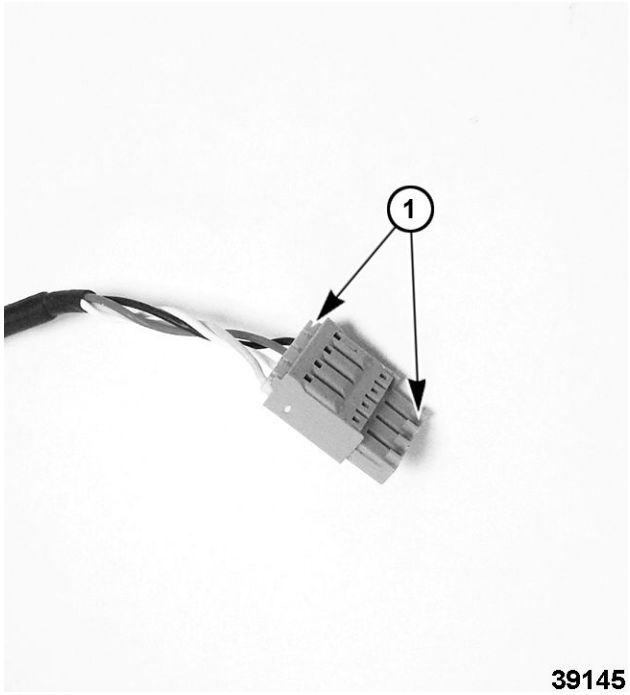


Fig. 11

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
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.

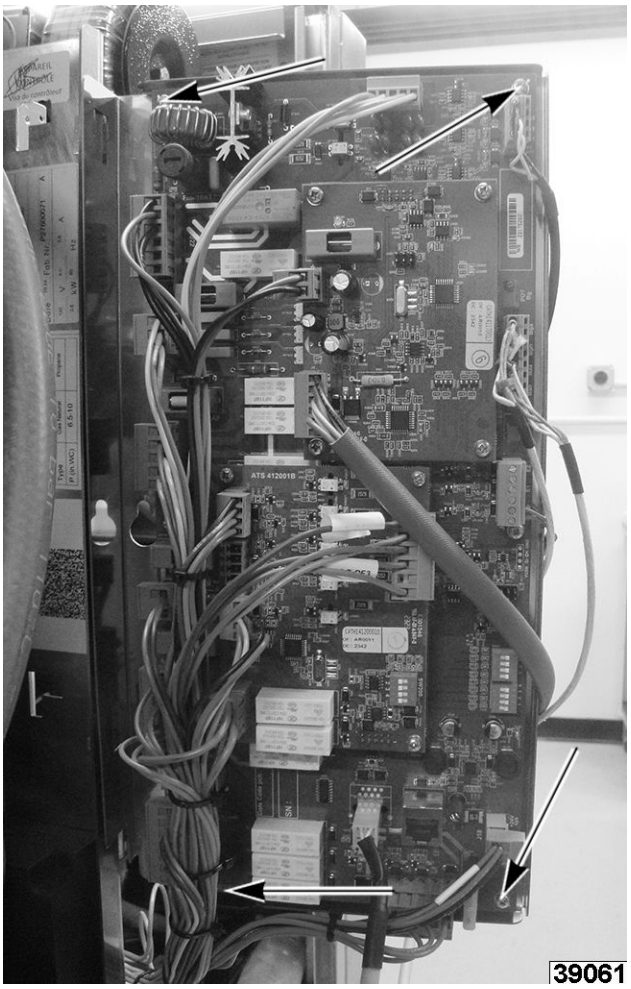


Fig. 12

5. Reverse procedure to install.
6. SET-UP SD CARD .
7. Verify proper operation.

CONTACTOR

⚠ WARNING

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

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
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.

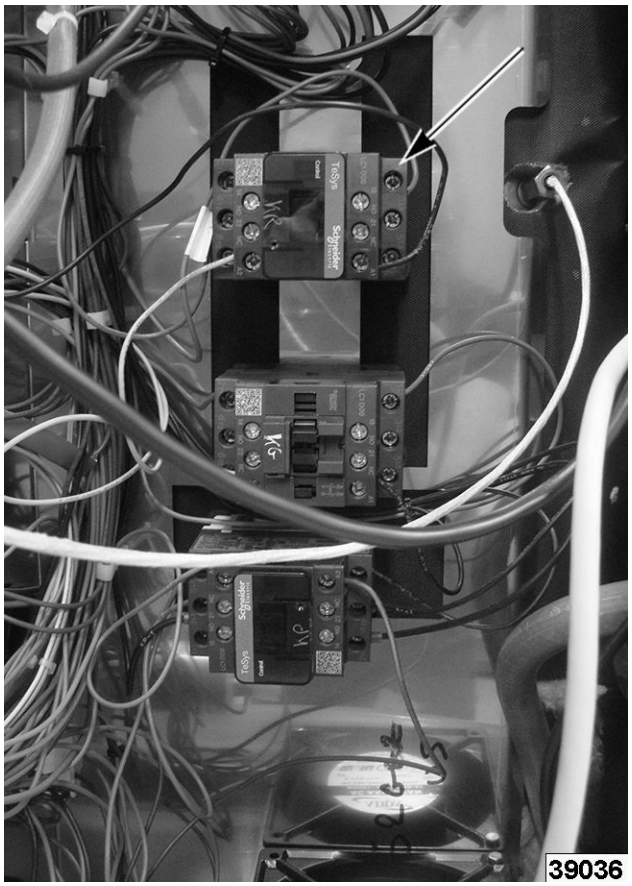


Fig. 13

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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Remove mounting bolt.

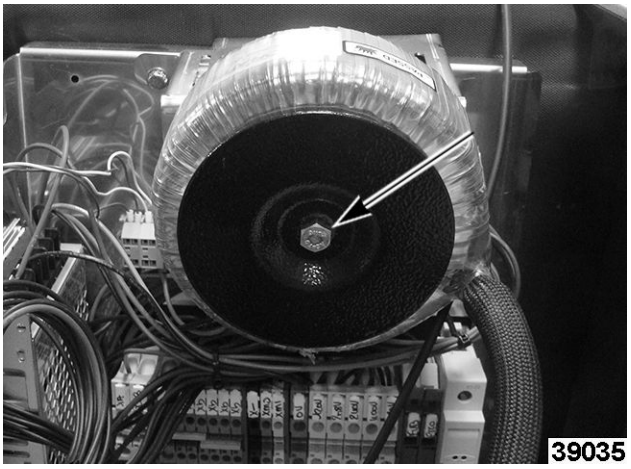


Fig. 14

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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Locate fuses (2, 3, Fig. 15) which are located on right side of terminal block (1, Fig. 15).

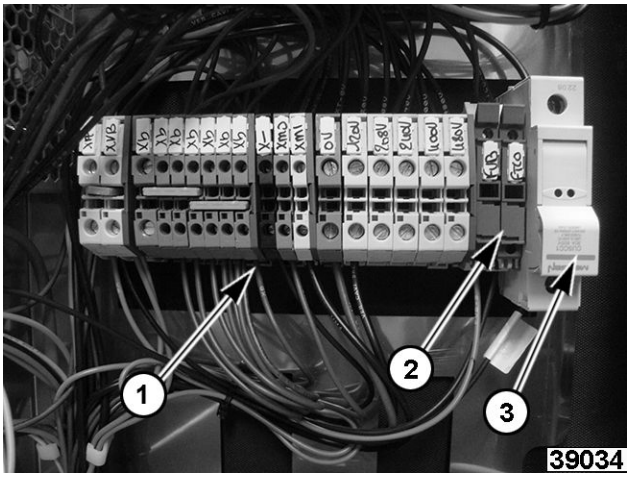


Fig. 15

- 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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .

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.

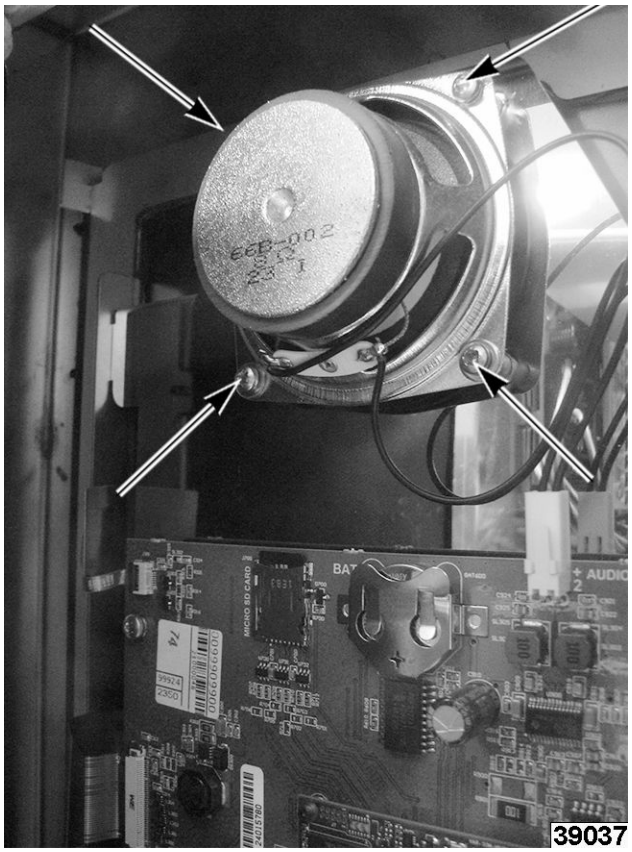


Fig. 16

4. Reverse procedure to install.

ENCODER

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Pull knob off of control panel.
4. Unscrew nut from encoder shaft.

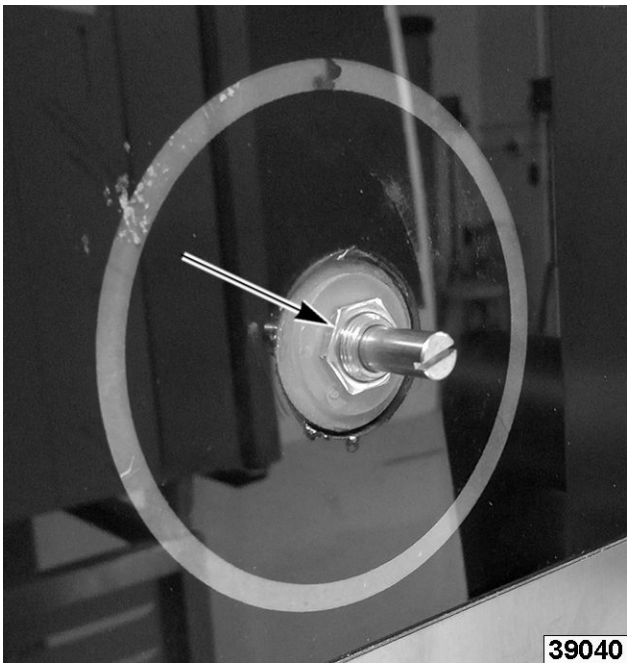


Fig. 17

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

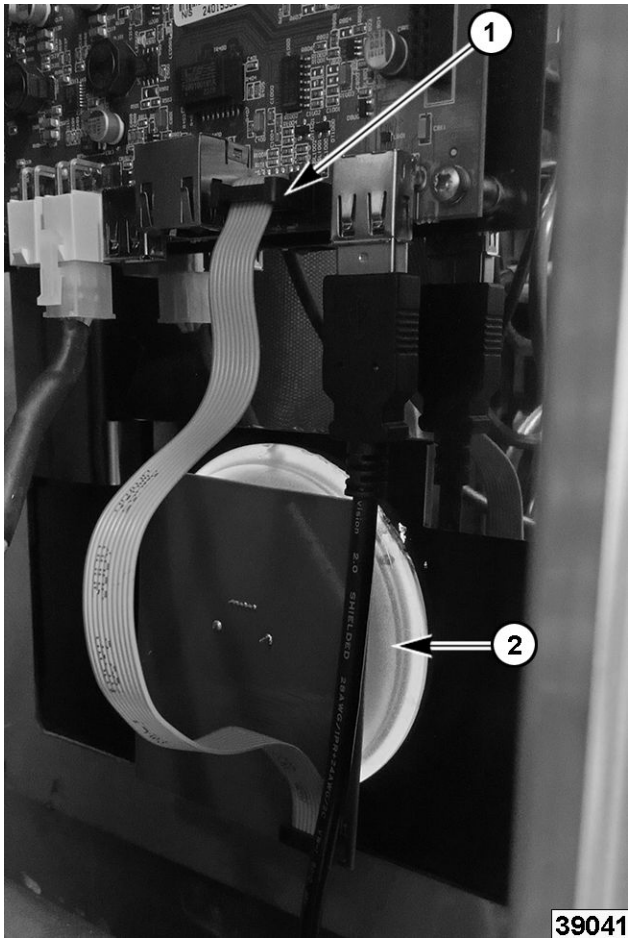


Fig. 18

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.

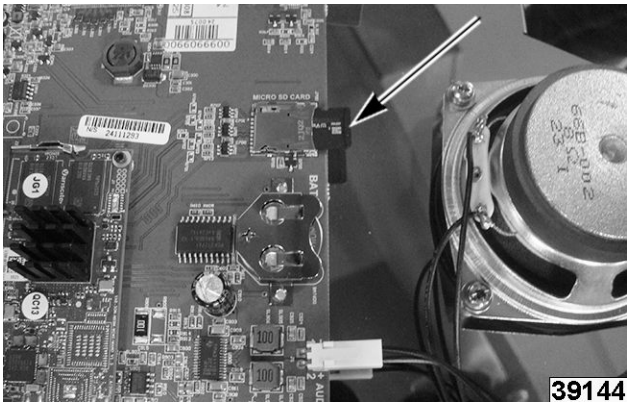


Fig. 19

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

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .

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.

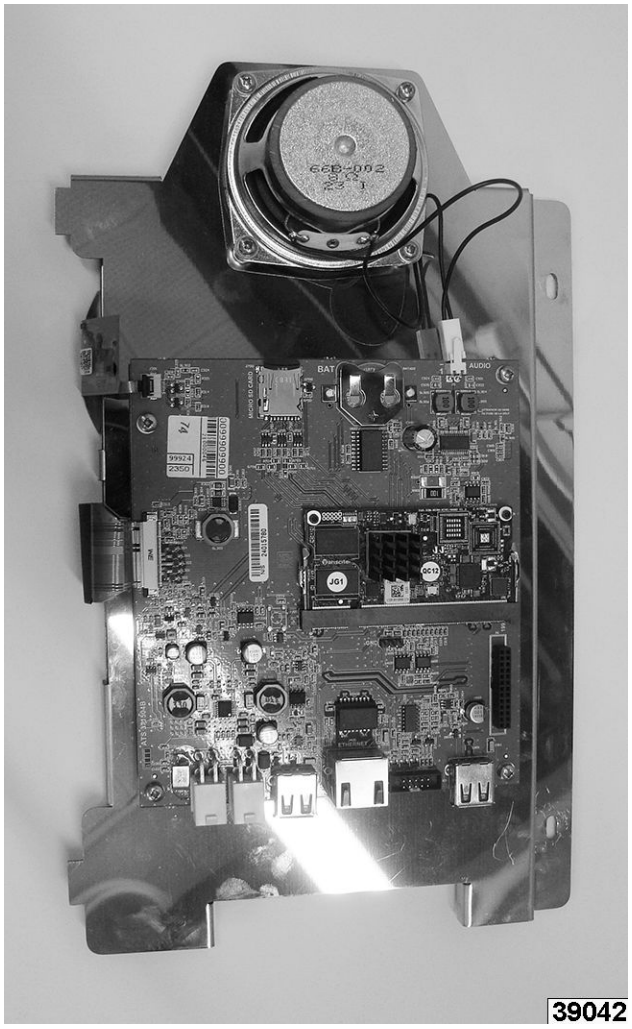


Fig. 20

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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
4. Disconnect door wiring behind I/O board (Fig. 21) 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.

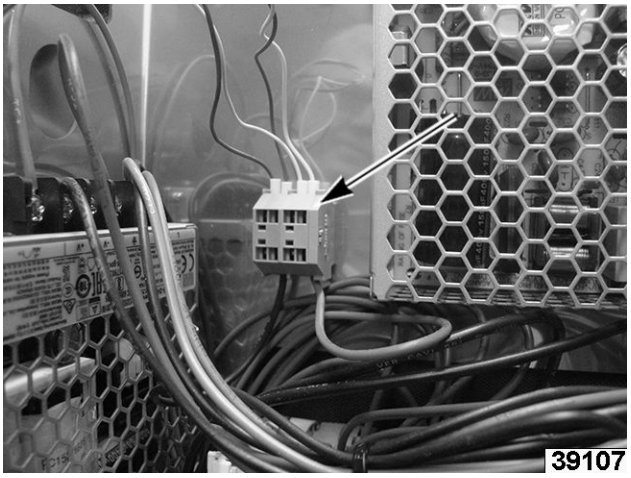


Fig. 21

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

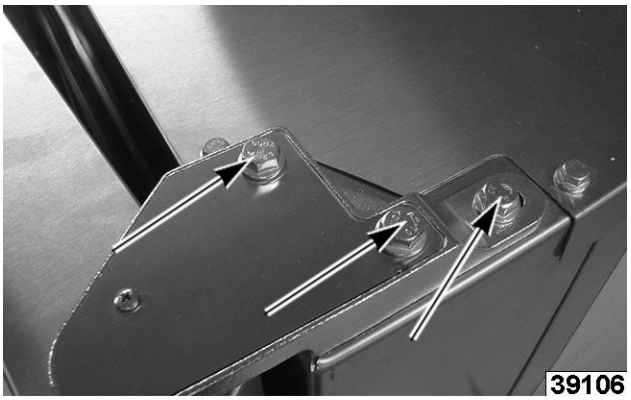


Fig. 22

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.

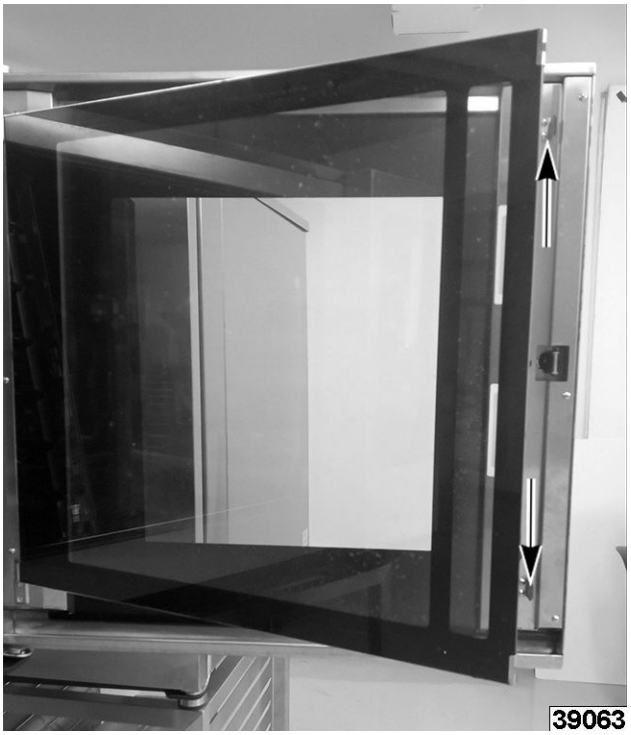


Fig. 24

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.

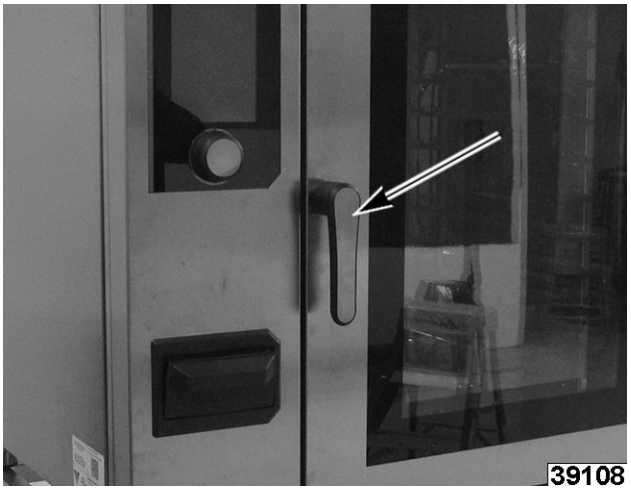


Fig. 26

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.

WATER LEVEL PROBE

⚠ 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).

Fig. 28

4. Unscrew probe (2, Fig. 28) with 13 mm wrench.
5. Install with Loctite®567 on threads.
6. Reverse procedure to install.
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.

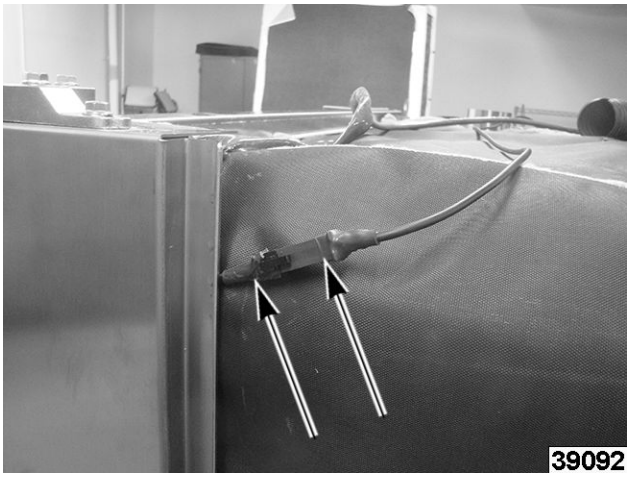


Fig. 29

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.

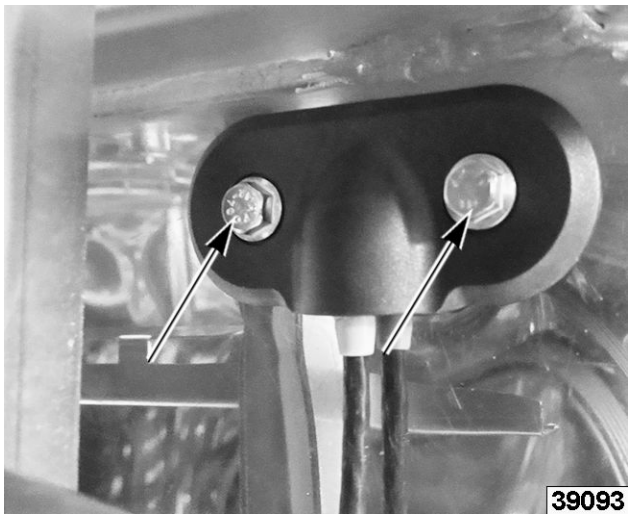


Fig. 31

7. Disconnect core probe wires inside of oven cavity.

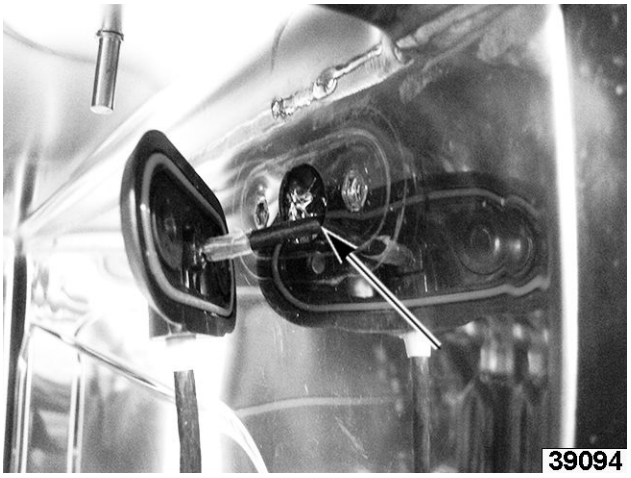


Fig. 32

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.

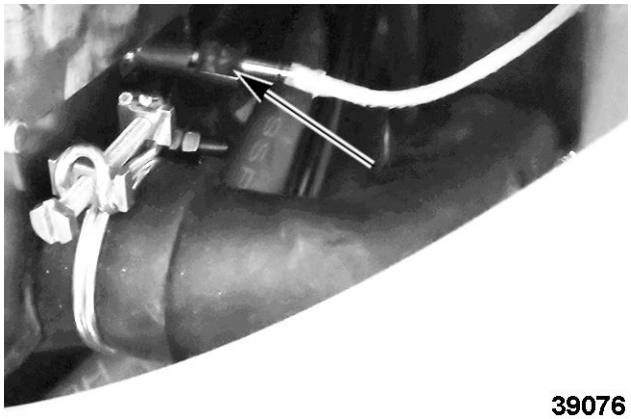


Fig. 33

NOTE: Electric unit shown in Fig. 34.

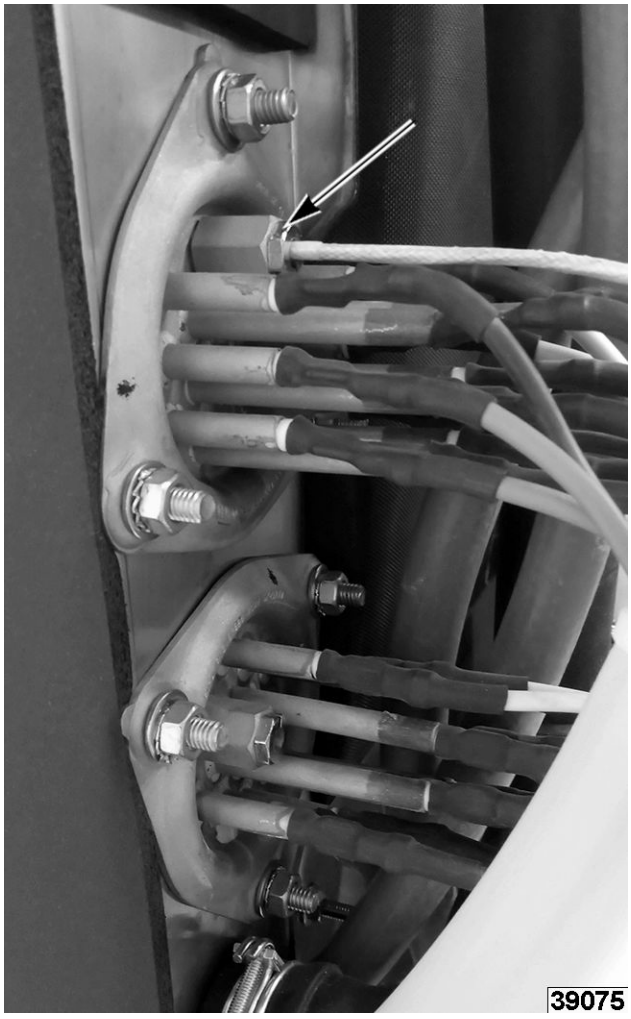


Fig. 34

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.

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Note and disconnect wiring.

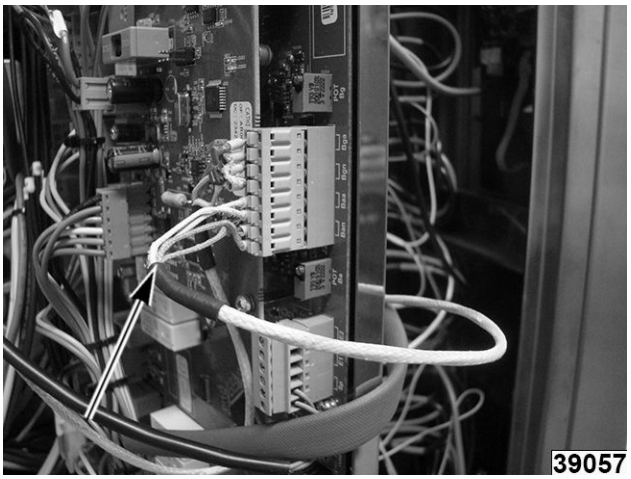


Fig. 35

4. Open door and remove clamp on probe inside cavity.

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

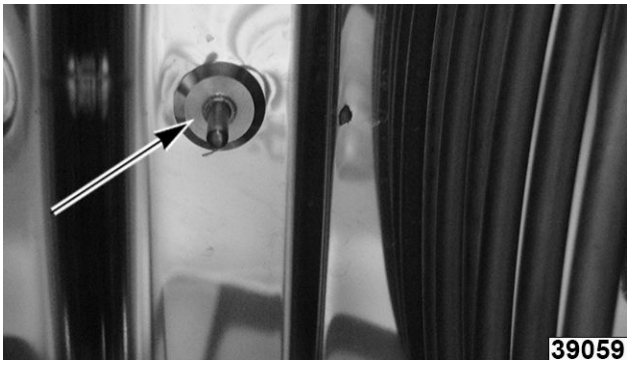


Fig. 36

5. Slide temperature probe outside through cavity wall.

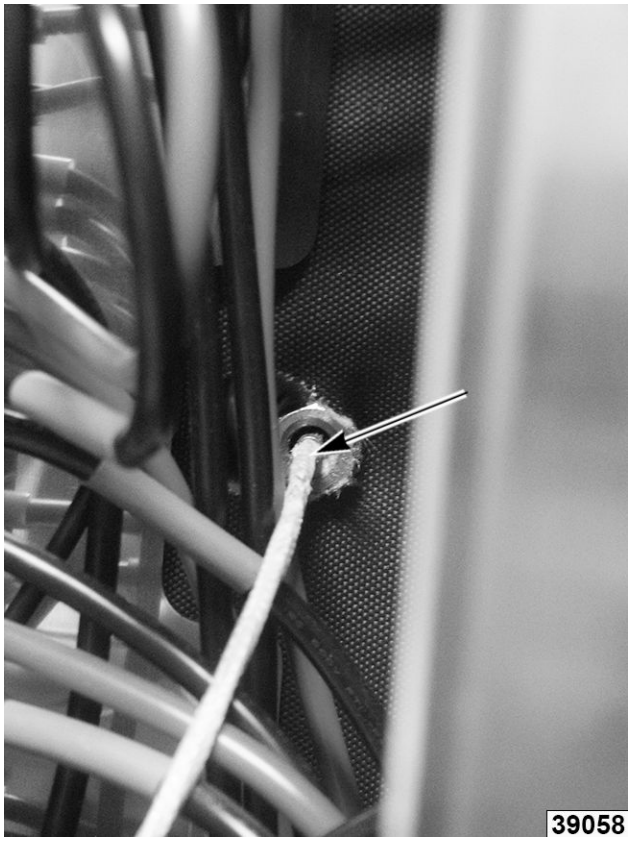


Fig. 37

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).

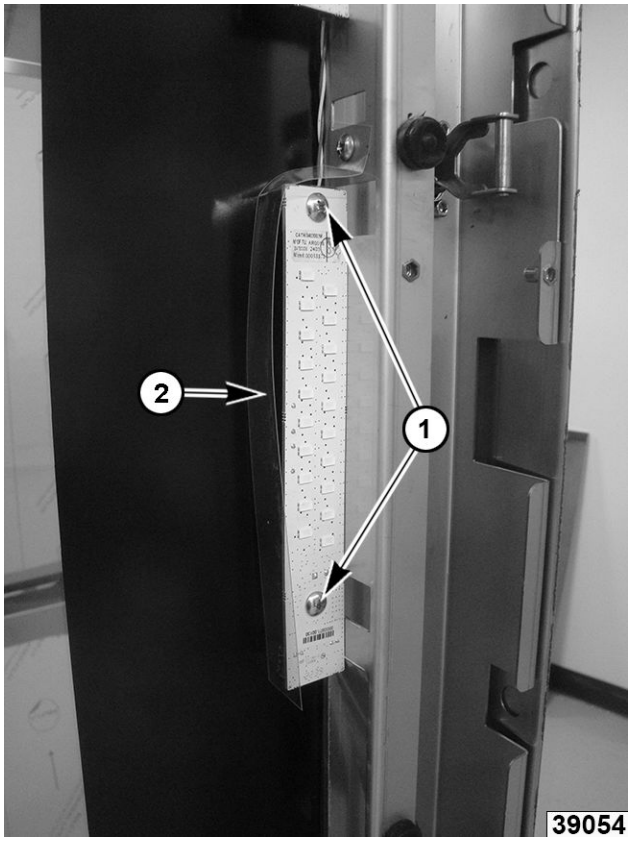


Fig. 39

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.

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. 40

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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Disconnect wire harness (J5, Brown and Blue) from board.

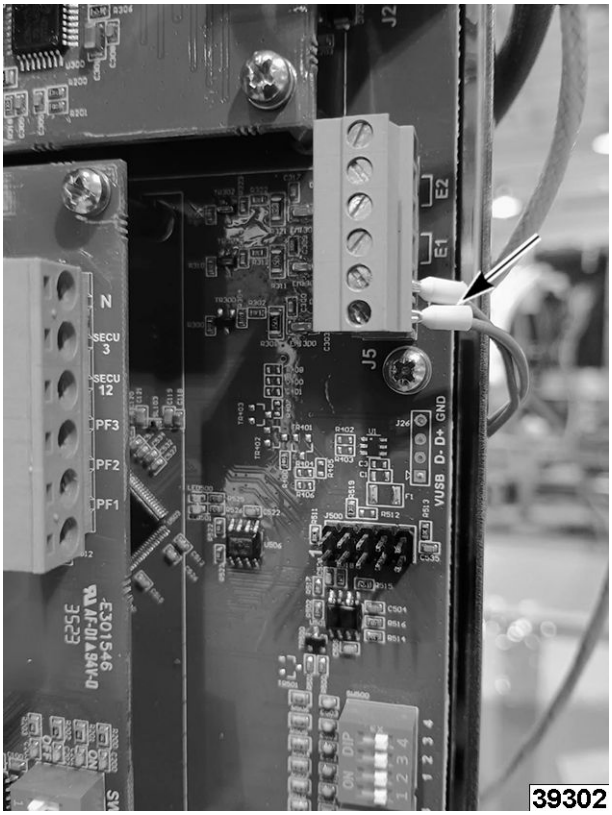


Fig. 41

4. Remove wire tie on reed switch (1, Fig. 42).

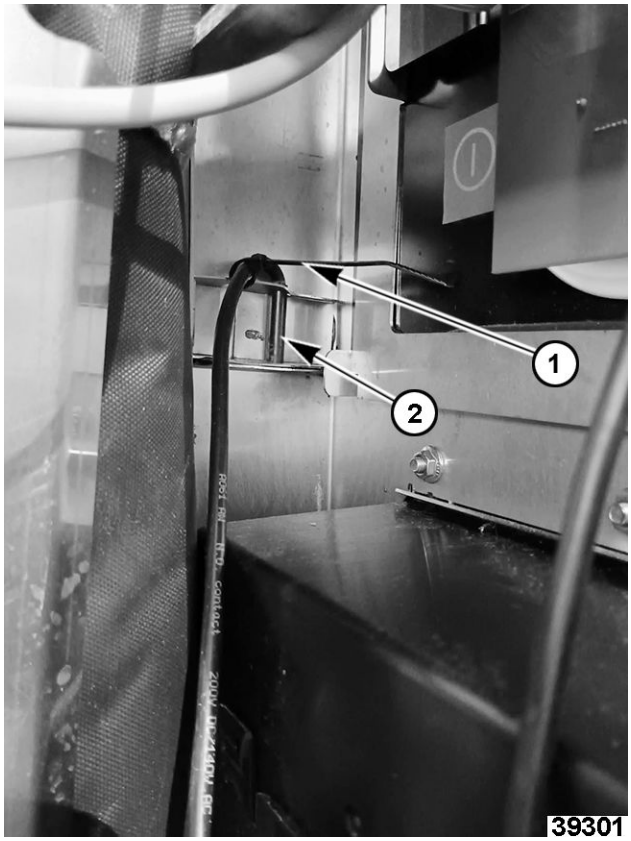


Fig. 42

5. Pull switch (2, Fig. 42) up to slide out harness (Fig. 43).

Fig. 43

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

SWITCH 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 bring removed.

   • Switch Power Supply for Cavity Door Light, Solenoids, and optional Grease Gun (Ta on diagram) (1, Fig. 44).

   • Switch Power Supply for I/O Board 24 DC (Tc on diagram) (2, Fig. 44).

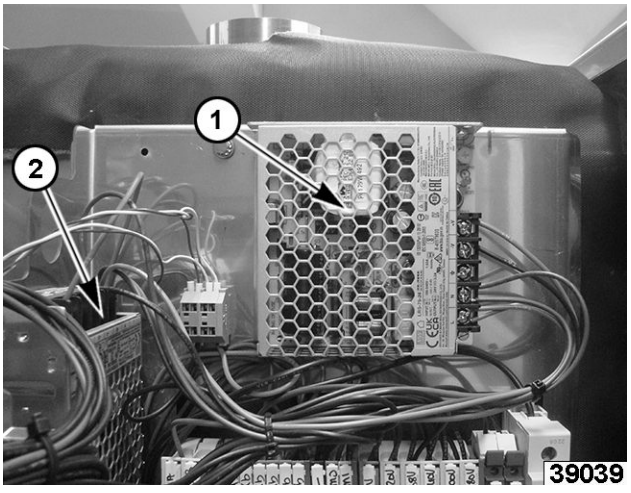


Fig. 44

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. 45) wire connector (1, Fig. 45).

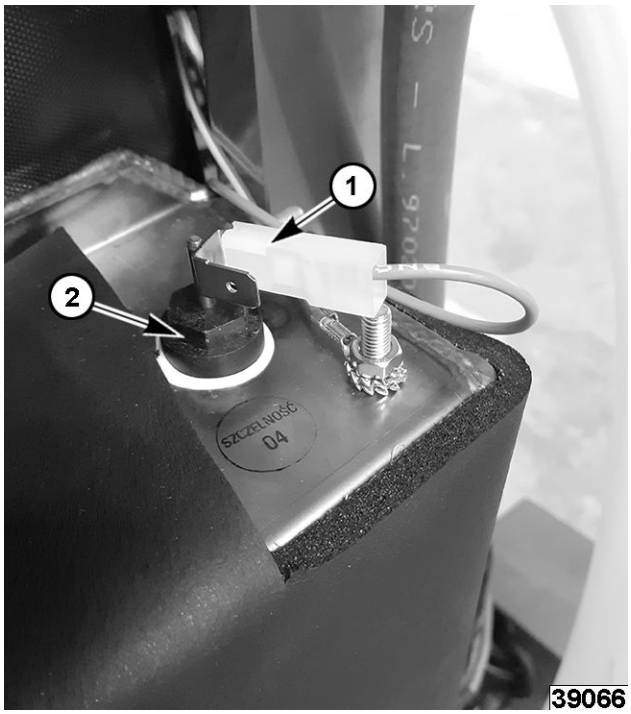


Fig. 45

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

5. Remove drain hose (1, Fig. 46) and completely drain steam generator.

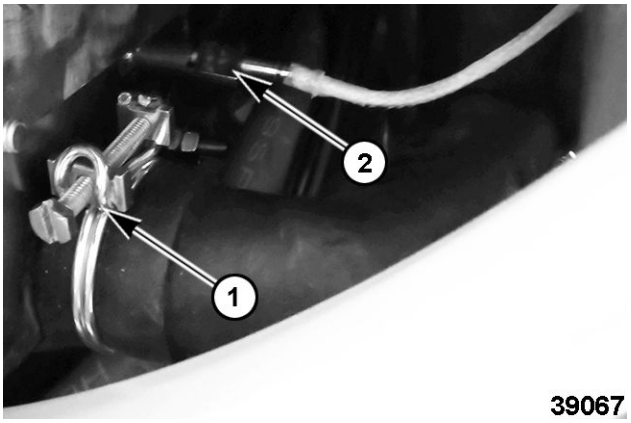


Fig. 46

6. Disconnect temperature probe (2, Fig. 46).
7. Remove arm bracket mounting bolt under left panel side.

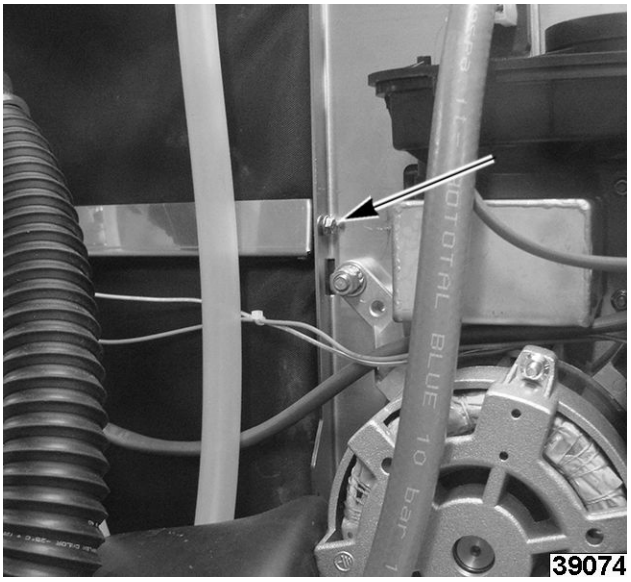


Fig. 47

8. Remove left panel side mounting bolts.

Fig. 48

9. Remove mounting bolts on oven rear side.

Fig. 49

10. Carefully pull steam generator out.

NOTE: Pull down to clear exhaust from top panel.

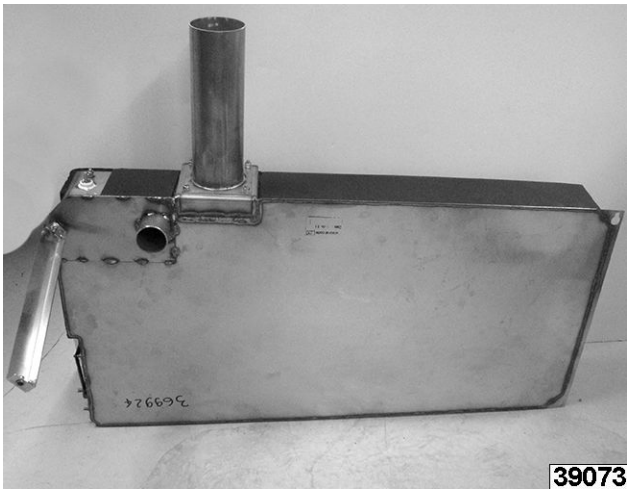


Fig. 50

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

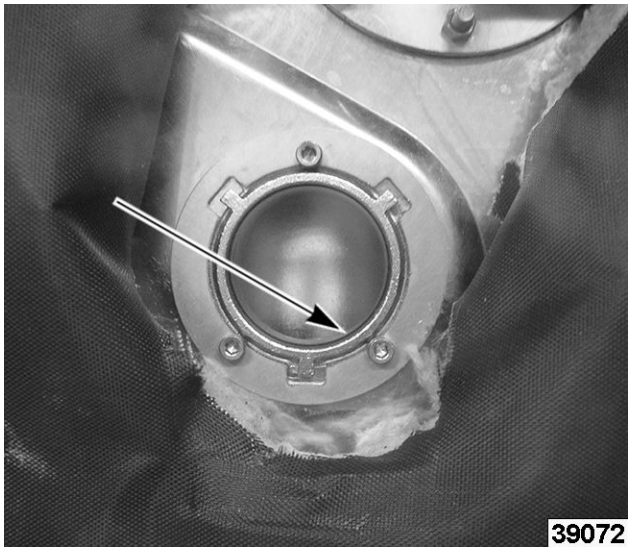


Fig. 51

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. 52.

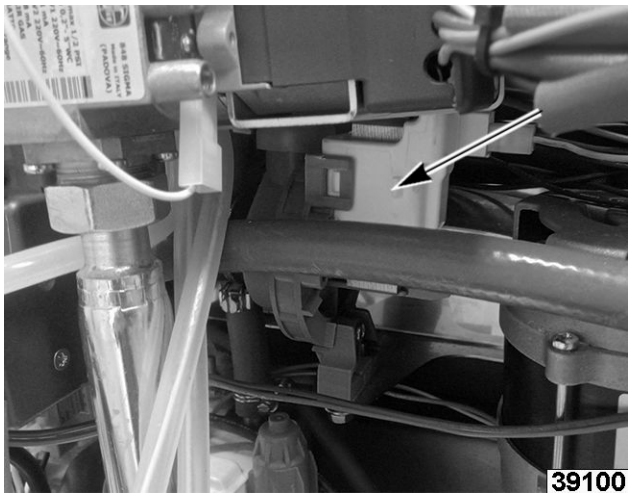


Fig. 52

1. Remove LEFT PANEL.
2. Note and disconnect wiring connectors (1, Fig. 53).

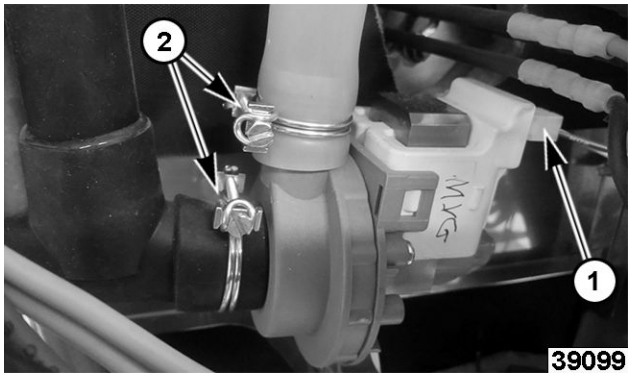


Fig. 53

3. Note and disconnect hoses (2, Fig. 53).
4. Remove mounting bracket bolts.

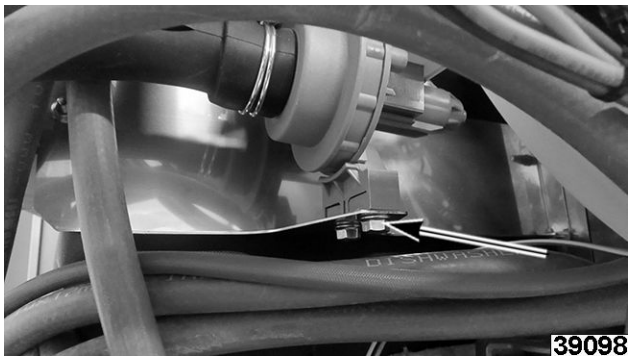


Fig. 54

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. 55).

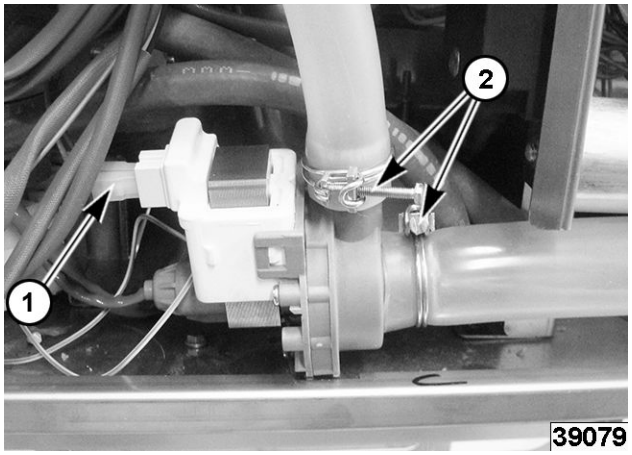


Fig. 55

3. Disconnect tubing (2, Fig. 55).
4. Loosen screw on mounting bracket to remove.

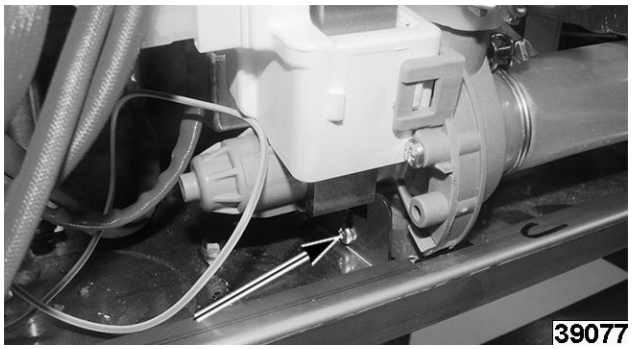


Fig. 56

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.

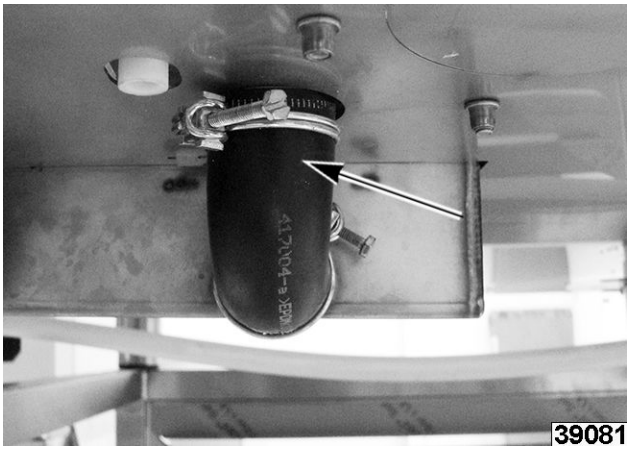


Fig. 57

3. Disconnect intake hose from wash pump (Fig. 58).

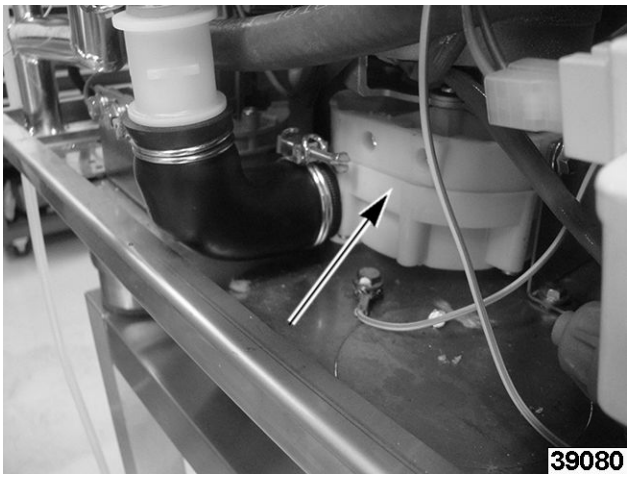


Fig. 58

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.

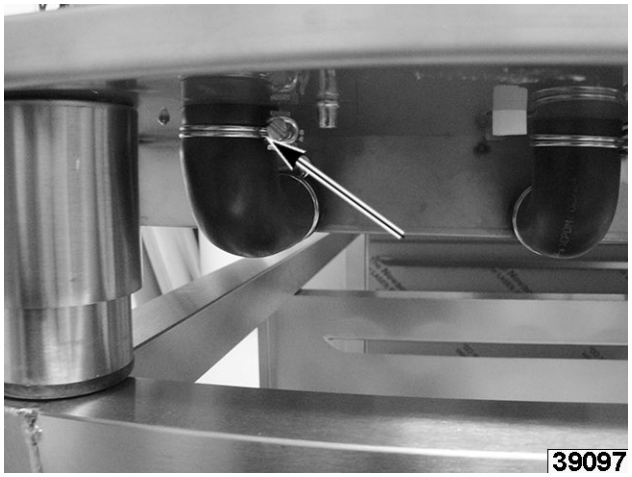


Fig. 59

3. Note and disconnect wire connectors (1, Fig. 60) to drain pump.

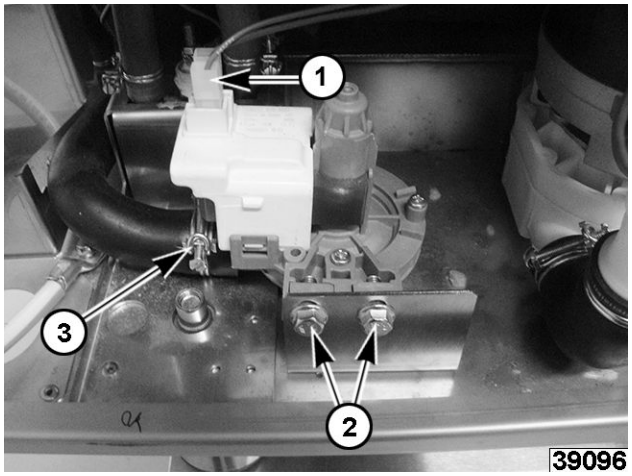


Fig. 60

4. Remove mounting bolts (2, Fig. 60).
5. Remove drain hose (3, Fig. 60).
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. 61

2. Note and disconnect wires (1, Fig. 62).

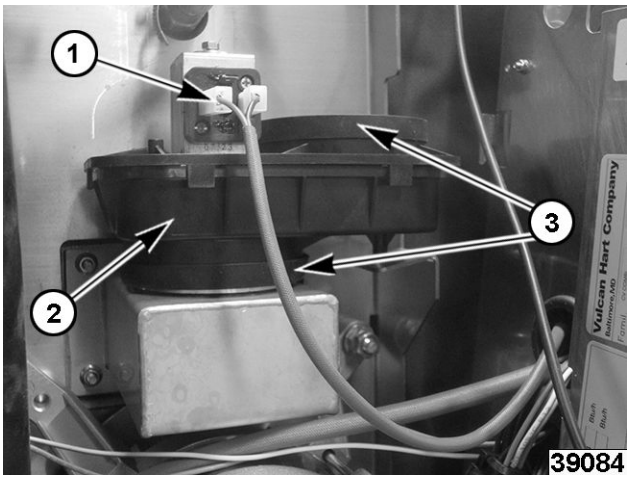


Fig. 62

3. Lift off motor (2, Fig. 62).
4. Reverse procedure to install.

NOTICE

When installing a new vent motor, replace both seals (3, Fig. 62).

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. 63

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

Fig. 64

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

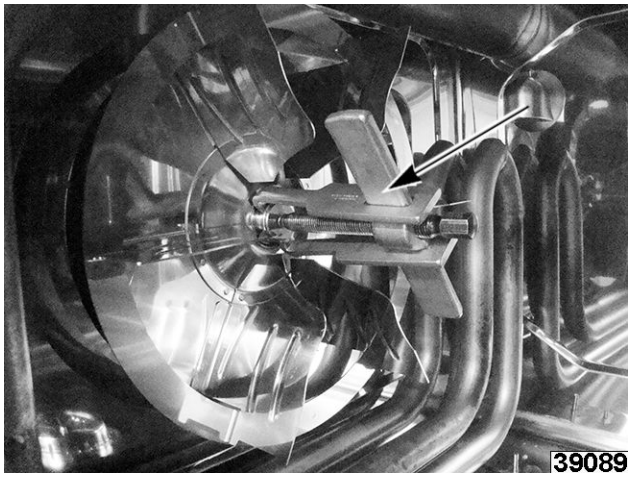


Fig. 65

⚠ WARNING

Proto puller may pop off when heating hub.

5. Apply heat to hub.

Fig. 66

6. Remove bolt.

Fig. 67

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.

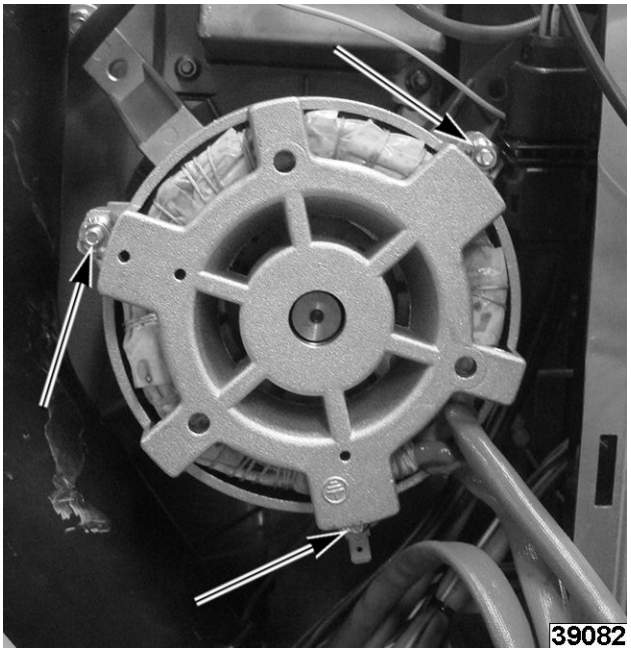


Fig. 68

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. 69

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

Fig. 70

5. Install rack guides.

Fig. 71

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.

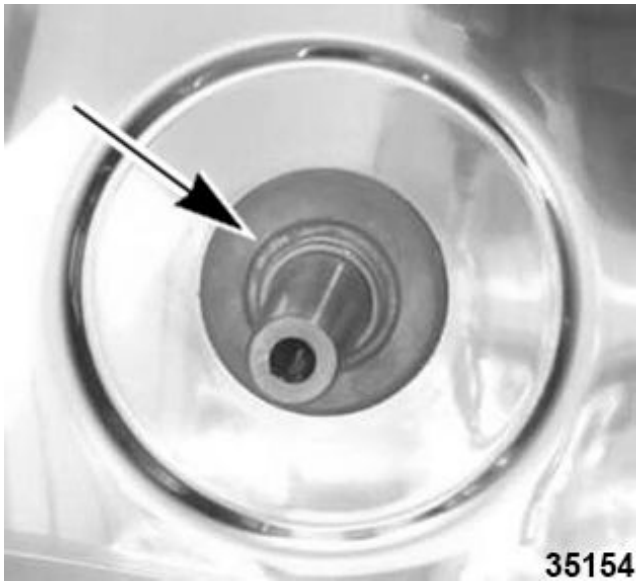


Fig. 72

NOTICE

Wear ring (1, Fig. 73) should also be replaced when changing shaft seal (2, Fig. 73).

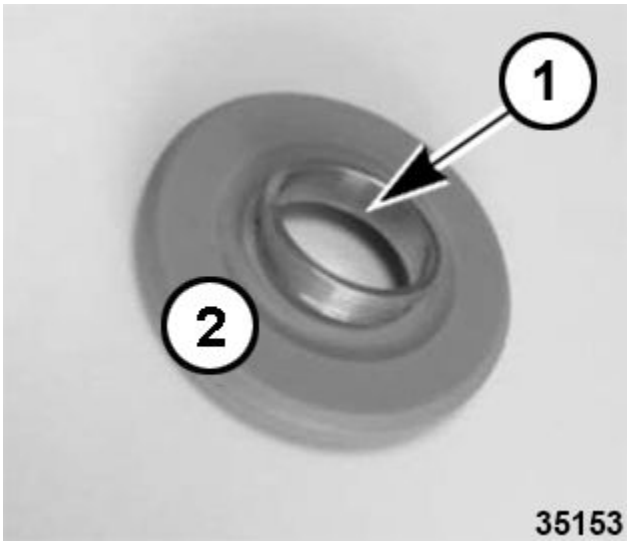


Fig. 73

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. 74).

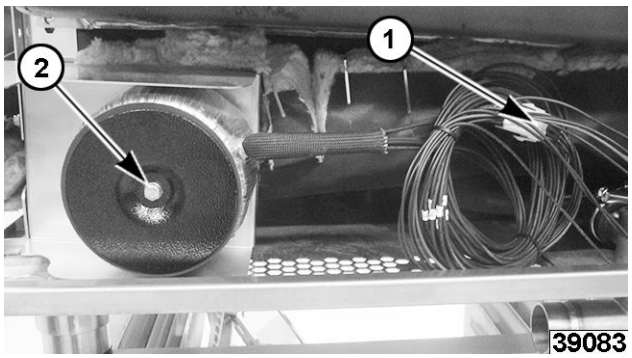


Fig. 74

3. Remove mounting screws (2, Fig. 74).
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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Locate oxygen sensor behind main board.

Fig. 75

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

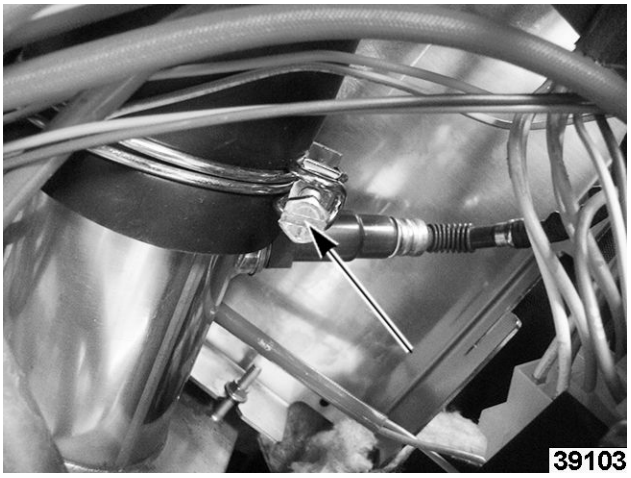


Fig. 76

5. Cut zip tie off oxygen sensor wiring.

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

6. Note and disconnect wiring connector.

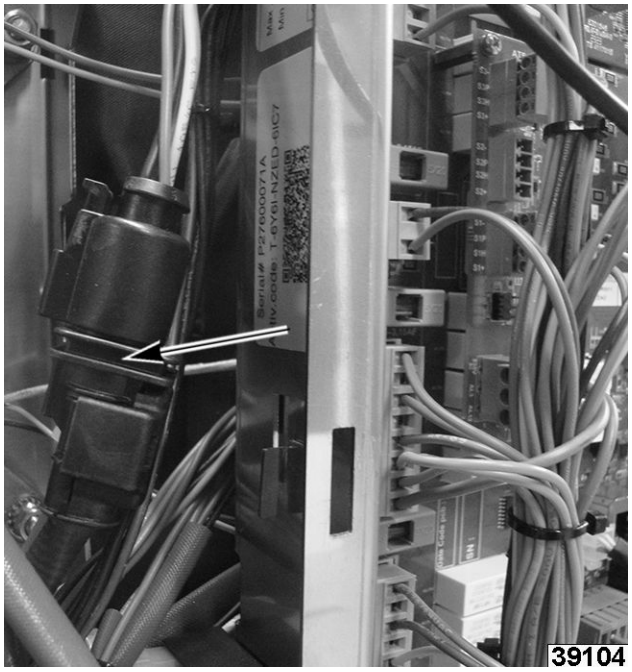


Fig. 77

7. Unscrew oxygen sensor from exhaust pipe.

NOTE: Utilize wrench flats to remove oxygen sensor.

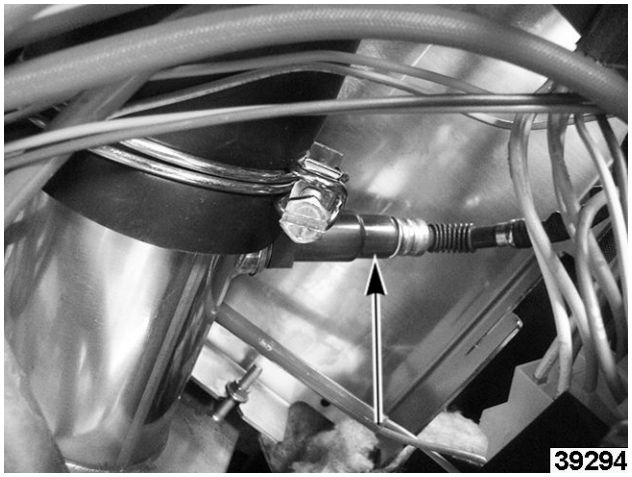


Fig. 78

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.

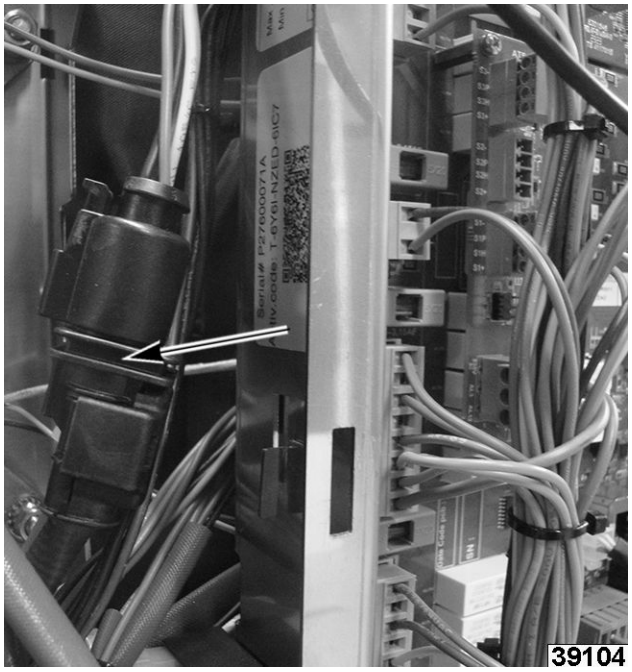


Fig. 79

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.

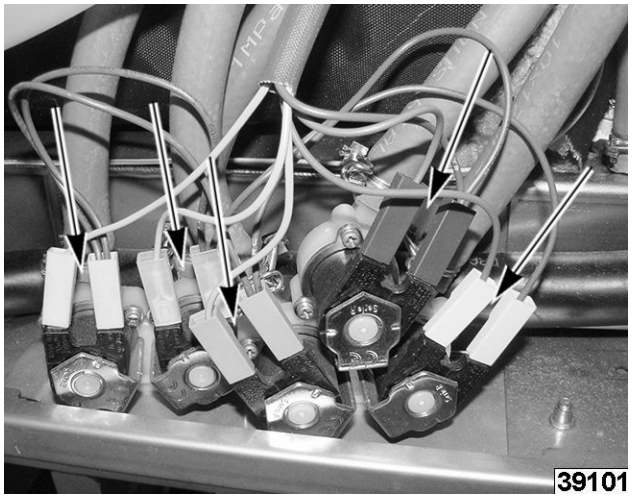


Fig. 80

4. Remove mounting screws from underneath unit.

Fig. 81

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. 82

3. Loosen two front screws.

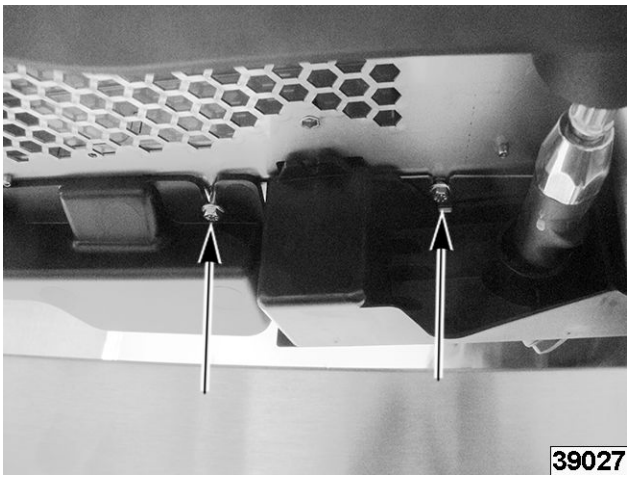


Fig. 83

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. 84) and outer (2, Fig. 84). Each set has its own wiring.

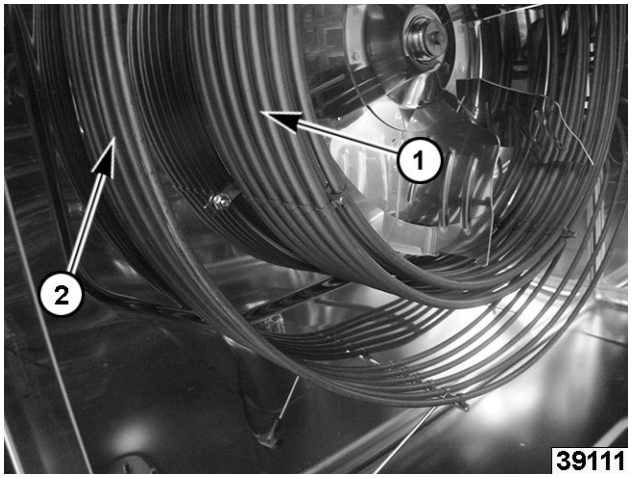


Fig. 84

1. Remove LEFT PANEL.
2. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Note and disconnect element wires from contactors.

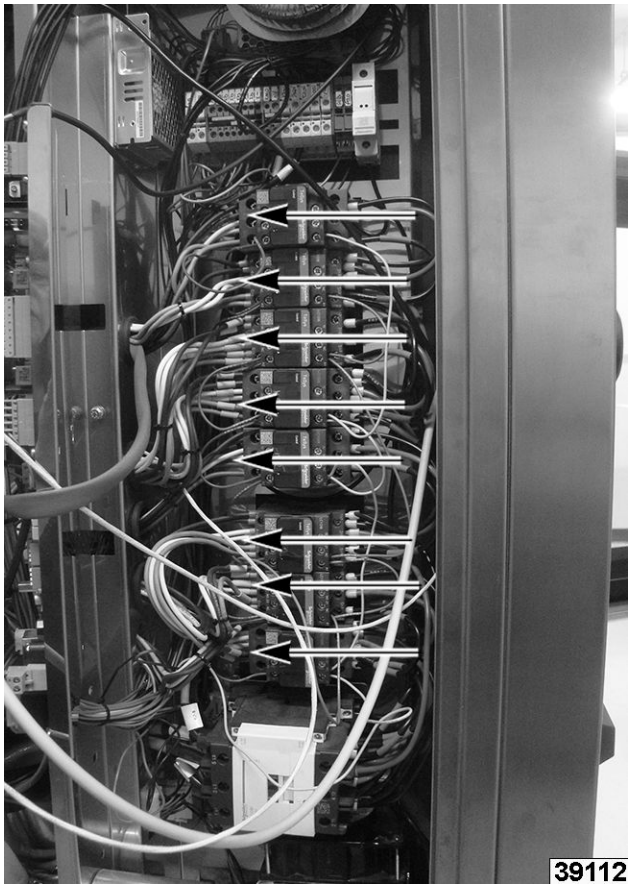


Fig. 85

4. Remove element mounting nuts outside oven cavity.

   Cavity Elements shown in Fig. 86 .

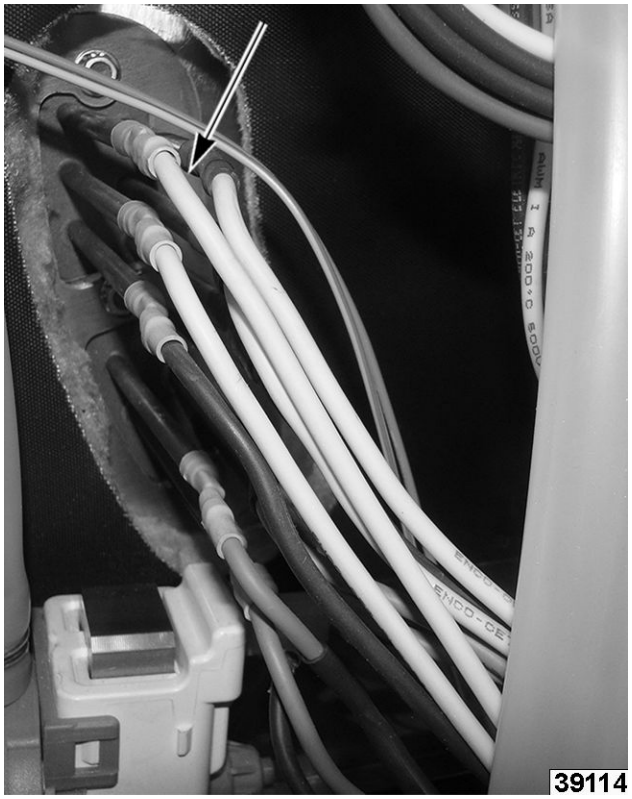


Fig. 86

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. 87) and outside (Fig. 88) cavity wall.

Cavity Elements Shown in Fig. 87

Fig. 87

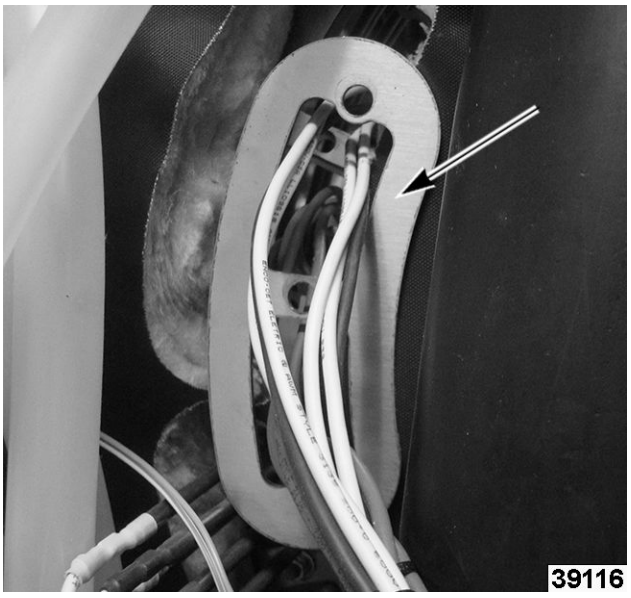


Fig. 88

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. ACCESS BEHIND MAIN BOARD MOUNTING BRACKET .
3. Note and disconnect element wires from contactors.
4. Remove element mounting nuts outside oven cavity.

NOTE: 62/102 Models (Fig. 89) will have two sets of elements, 61/101 models have one set.

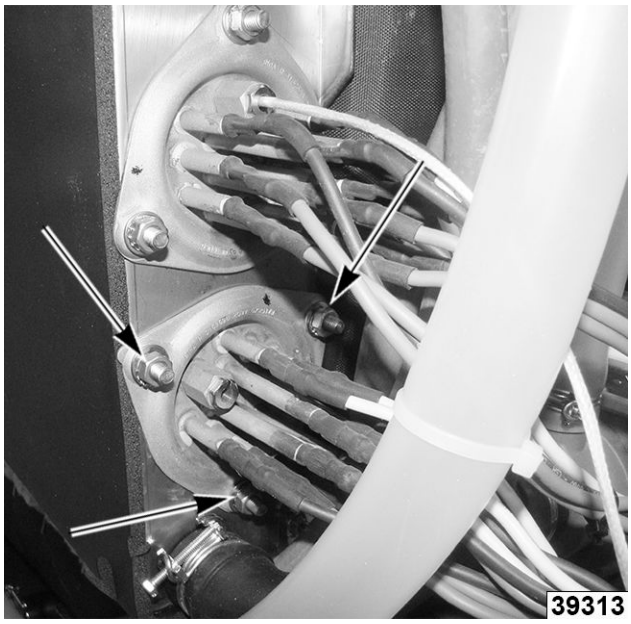


Fig. 89

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.

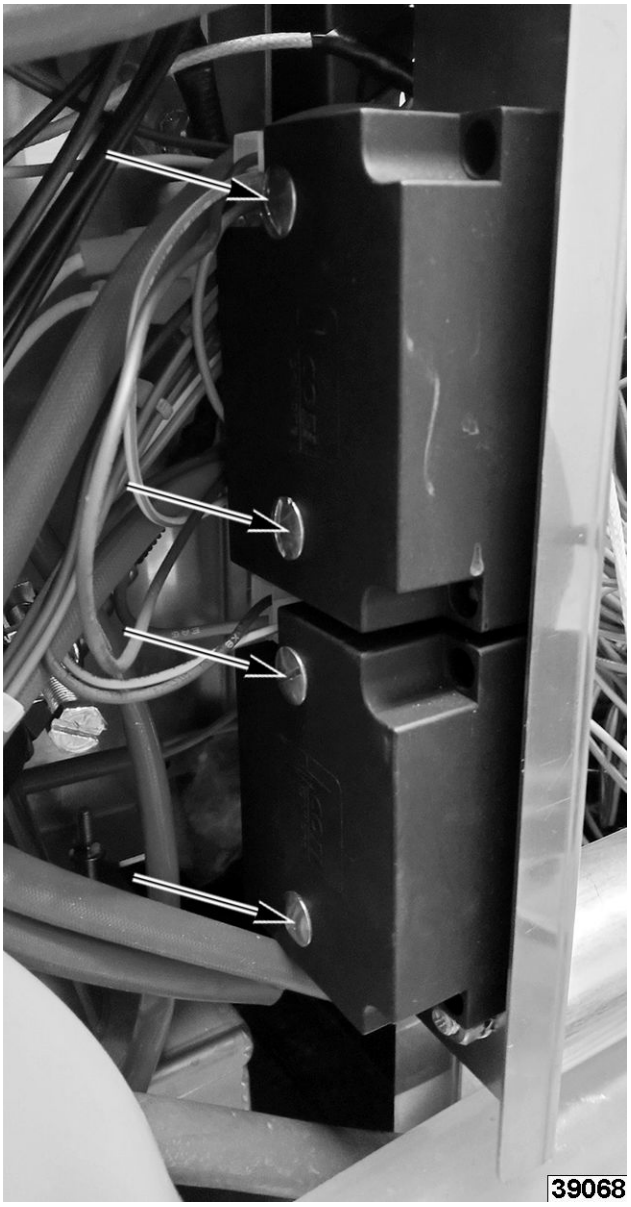


Fig. 90

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. 91

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. 92

4. Note and disconnect burner gas piping connections.

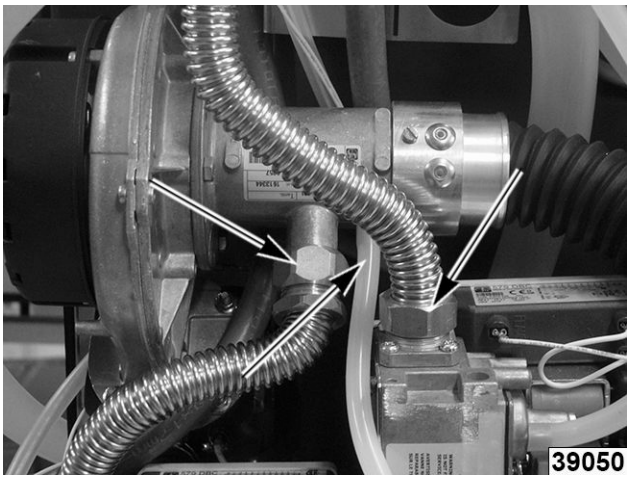


Fig. 93

5. Remove (4) 8mm mounting nuts.

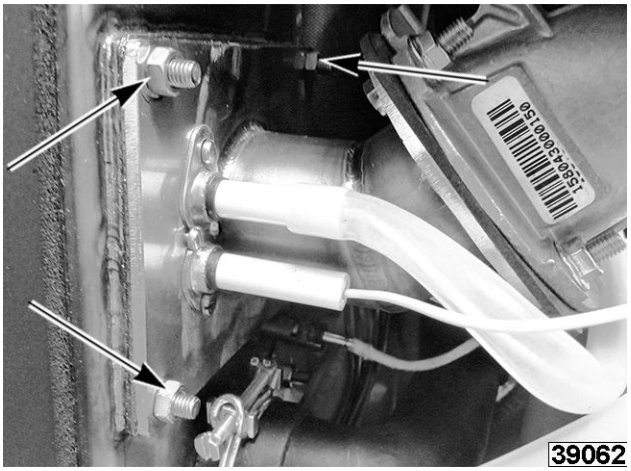


Fig. 94

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

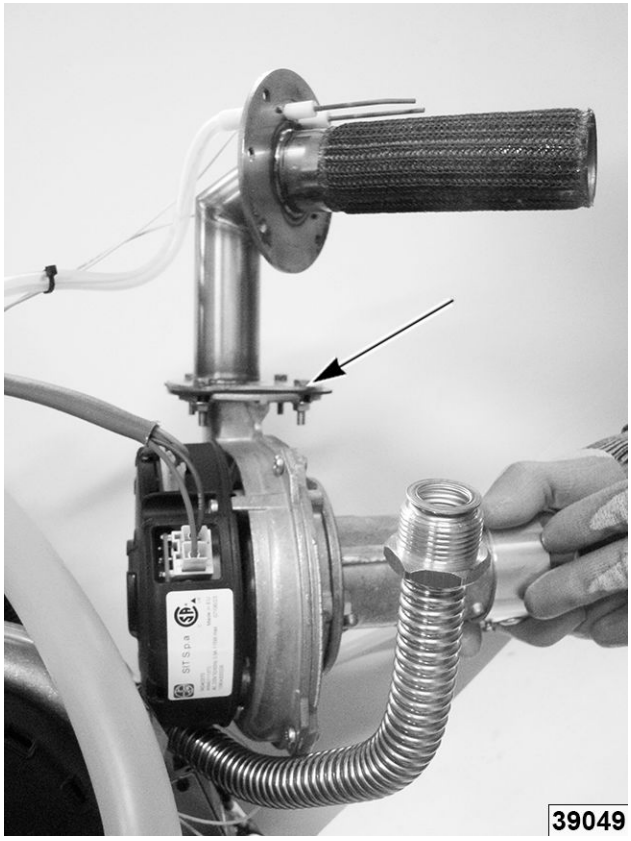


Fig. 95

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.

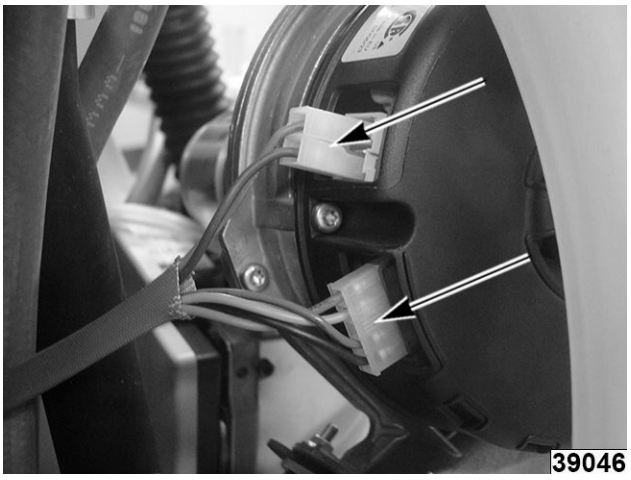


Fig. 96

NOTE: When disconnecting gas pipes, there will be a gasket (2, Fig. 98). Take care not to lose gasket or it may fall into an inaccessible area of the unit.

Fig. 97

3. Note and disconnect burner gas piping (1, Fig. 98) connections.

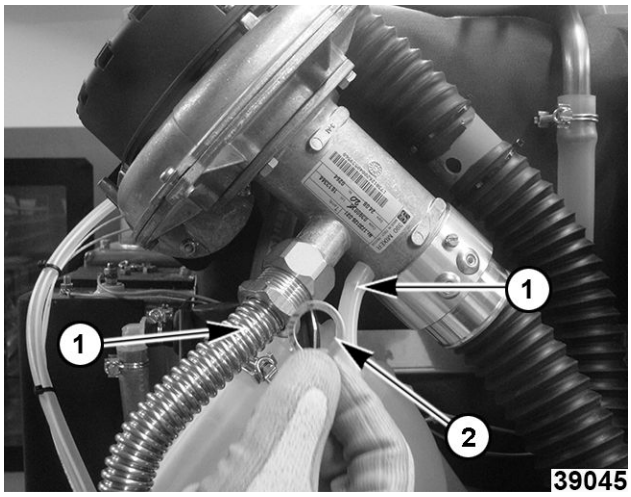


Fig. 98

NOTE: Place a clean rag (1, Fig. 99) over the open area to avoid nuts falling to where they can't be retrieved.

4. Remove (6) 8mm mounting nuts (2, Fig. 99).

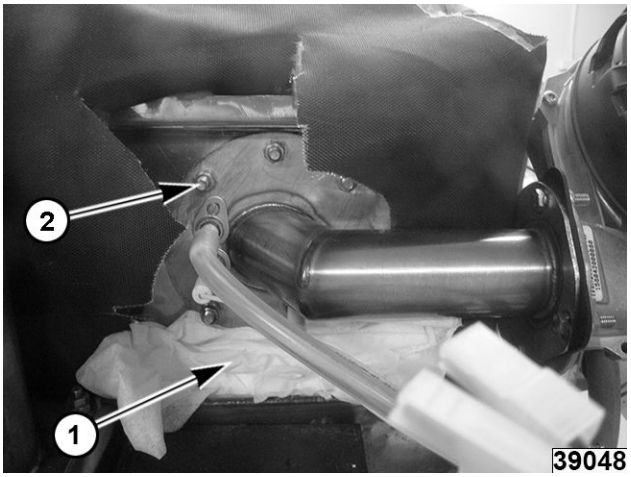


Fig. 99

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

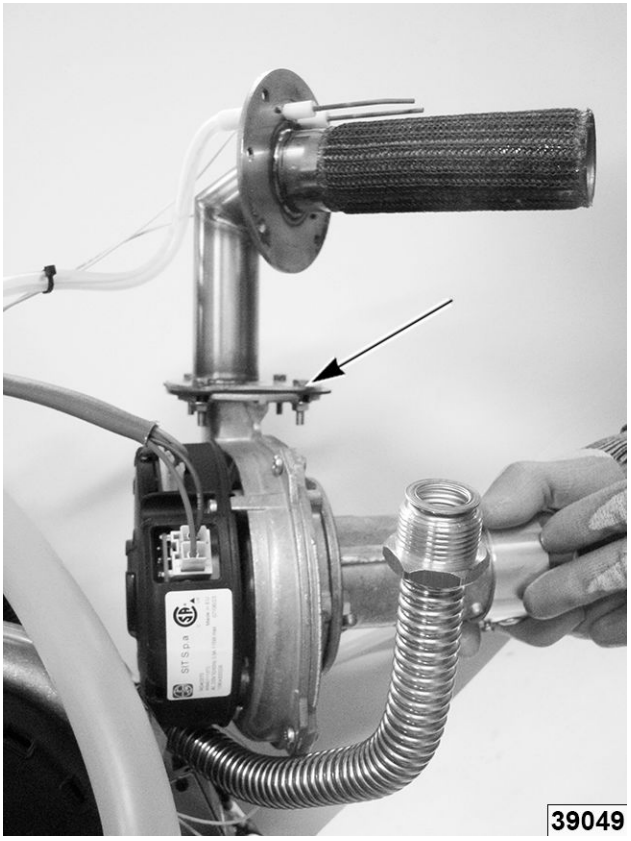


Fig. 100

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 - 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. 101) from gas valve.

   FRONT - CAVITY GAS VALVE SHOWN IN Fig. 101

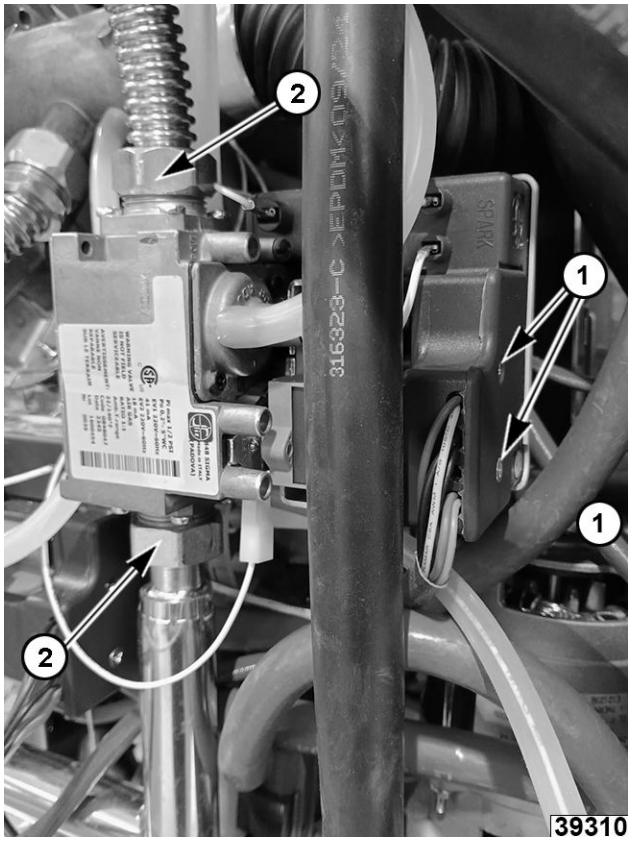


Fig. 101

BACK - STEAM GENERATOR GAS VALVE SHOWN IN Fig. 102

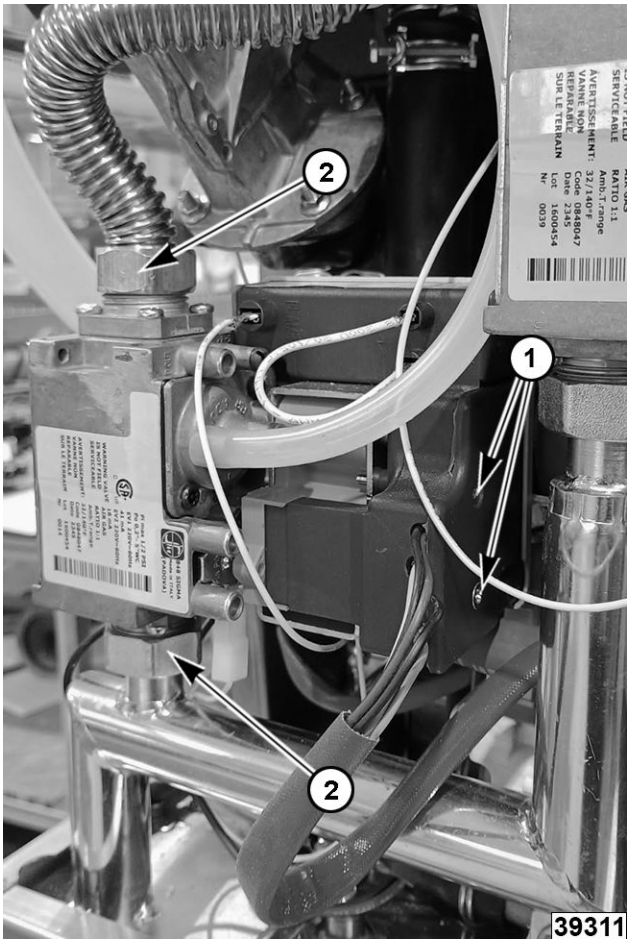


Fig. 102

3. Remove gas valves from unit.
4. Remove ignition module mounting screw (1, Fig. 102) 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.

GAS VALVE (1, Fig. 103)

IGNITION MODULE (2, Fig. 103)

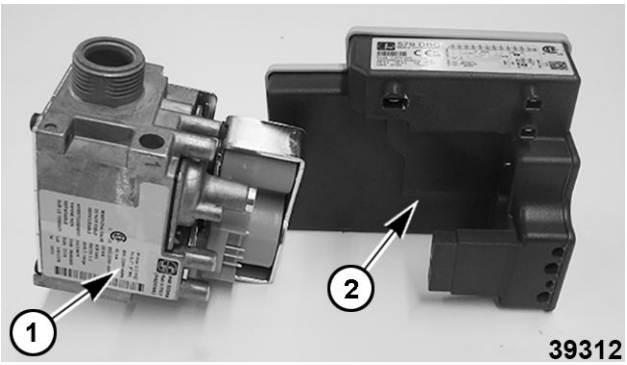


Fig. 103

5. Install new gas valve(s).
6. Connect gas lines.
7. GAS - ADJUST GAS VALVE as needed.
8. Confirm GAS SUPPLY PRESSURE and CO2 rate.

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. 104

NOTE: When disconnecting gas pipes, there will be a gasket (2, Fig. 105). 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. 105).

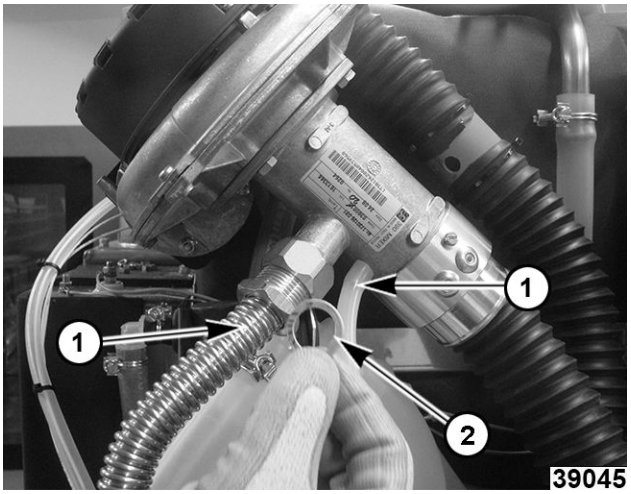


Fig. 105

5. Remove blower mounting screws (1, Fig. 106) from burner and venturi (2, Fig. 106).

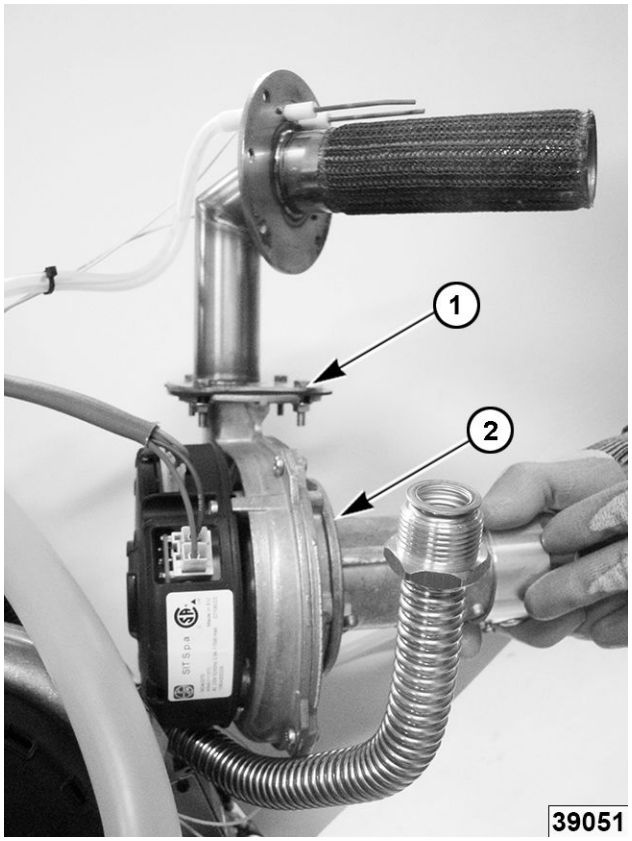


Fig. 106

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.

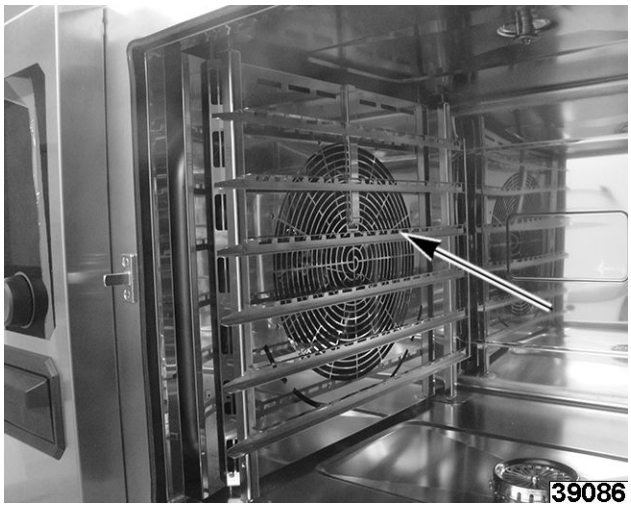


Fig. 107

   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. 108

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**.

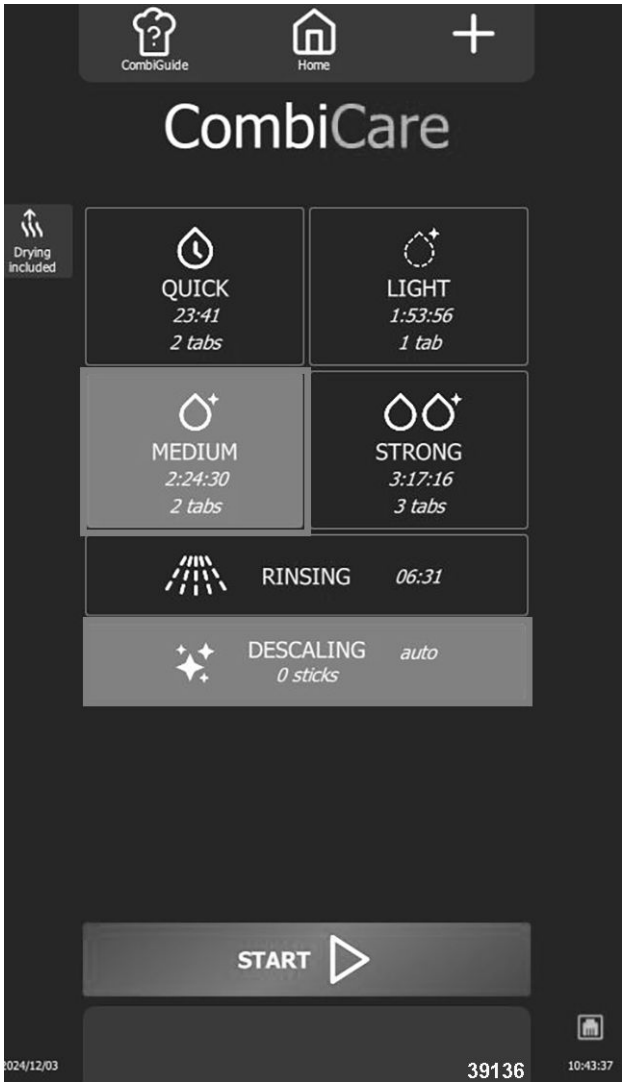


Fig. 109

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.

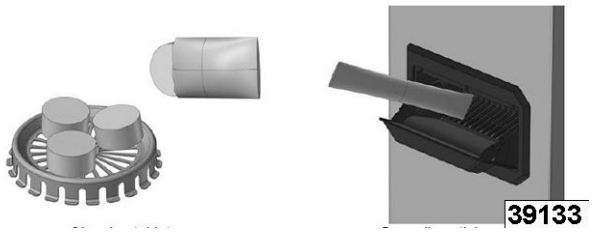


Fig. 110

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

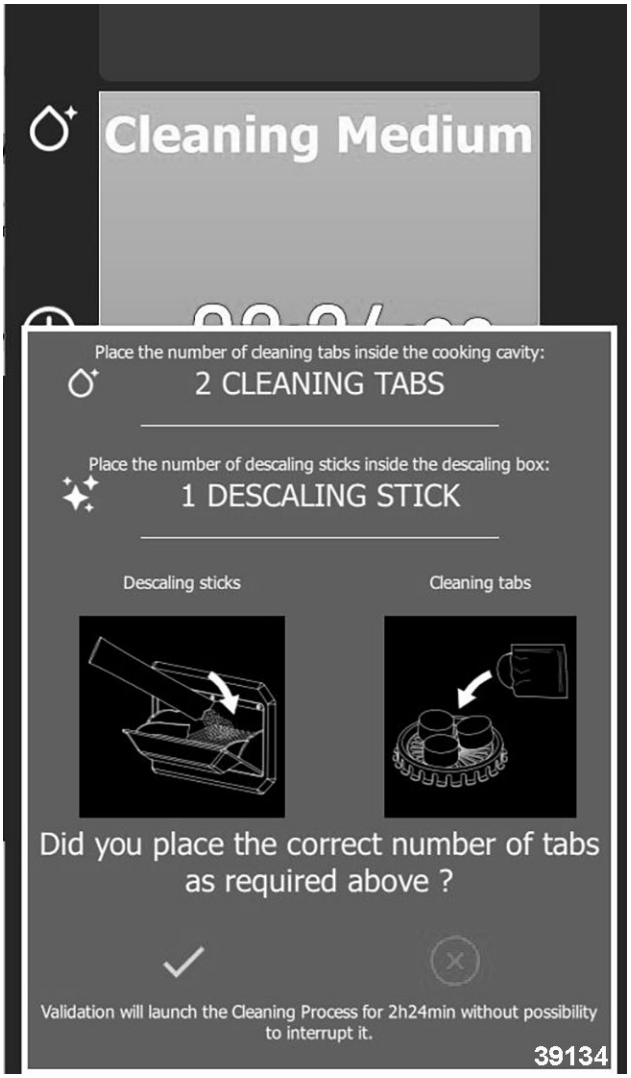


Fig. 111

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.

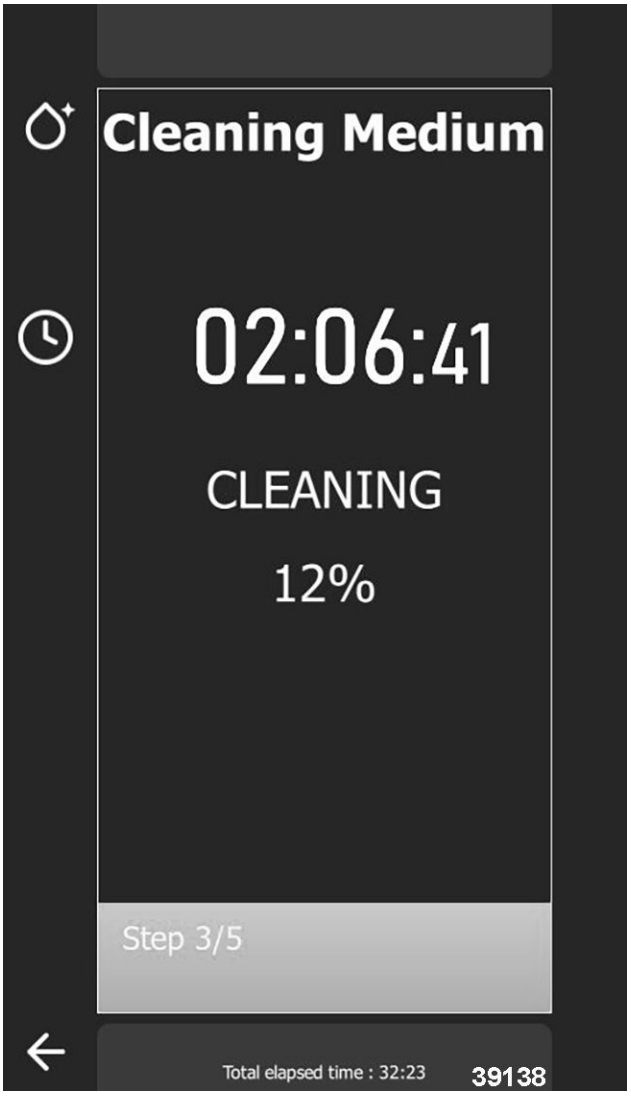


Fig. 112

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

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

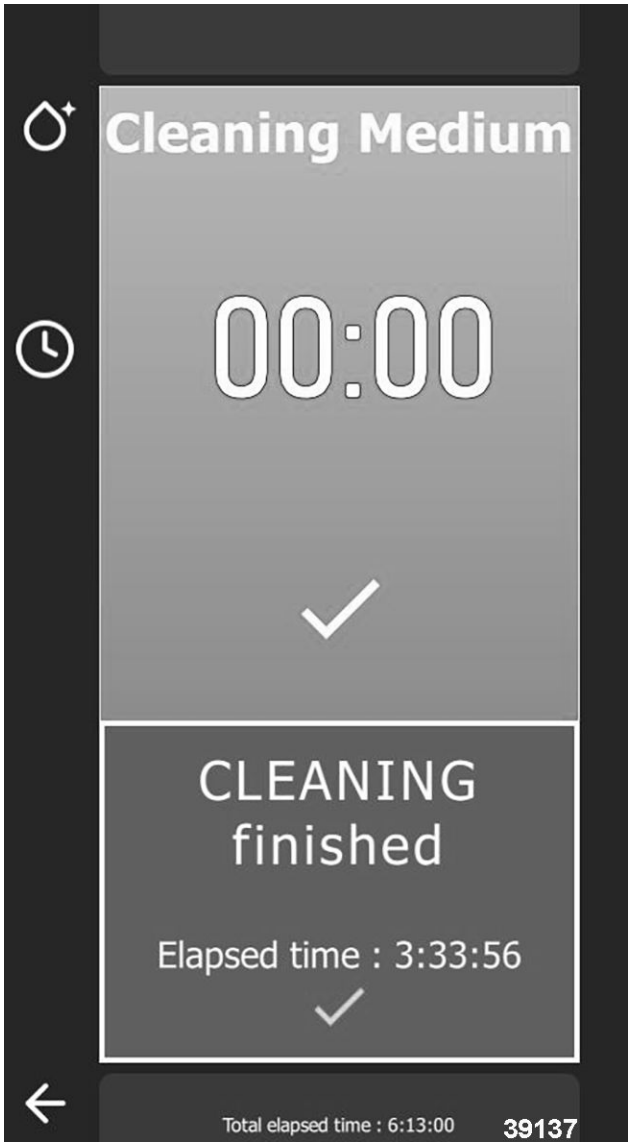


Fig. 113

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. 114

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.

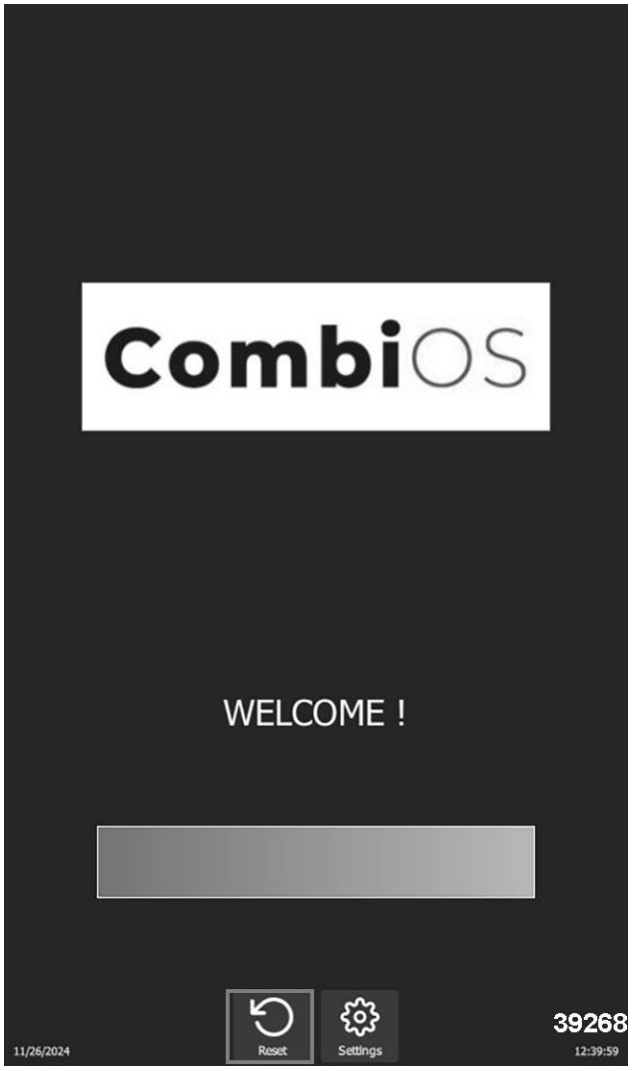


Fig. 115

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

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

Fig. 116

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. 117

- 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, 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!

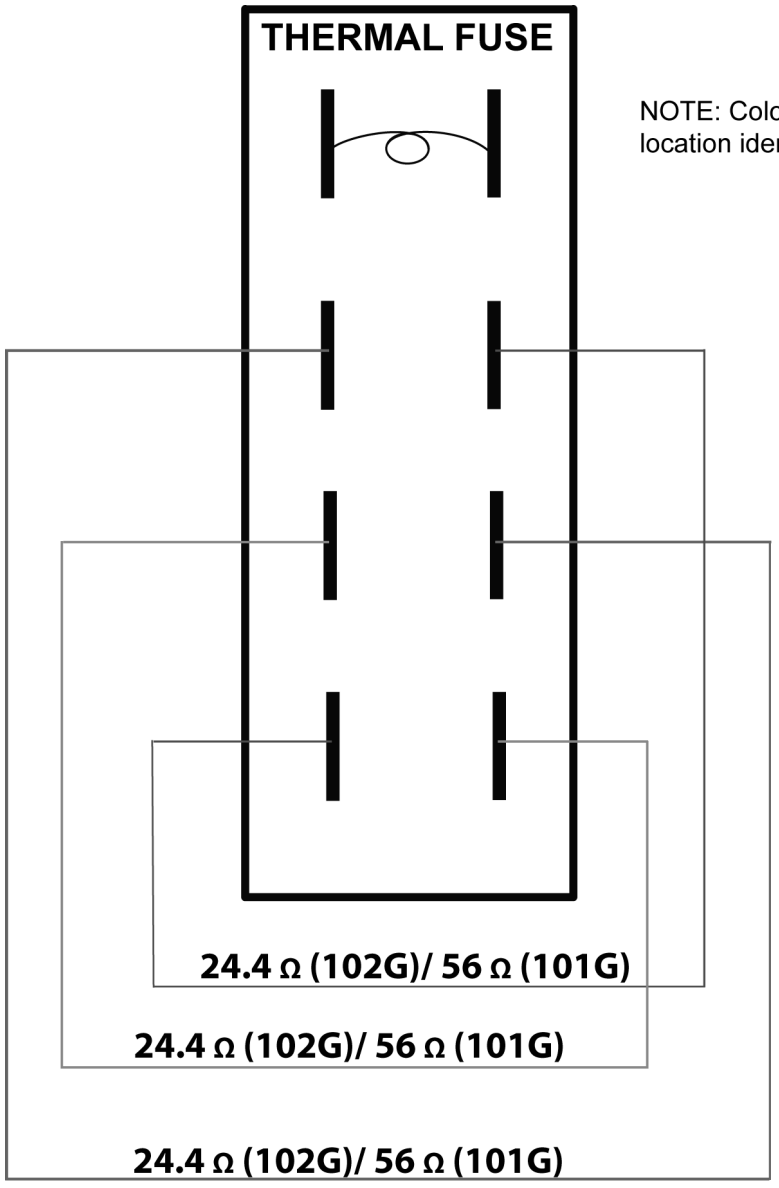
- **Deploy update from USB:** Reinstall an update from a USB stick This feature is active when a USB key is connected to the appliance. It allows you to reinstall (force) an update from a USB key.
- **Redeploy / Reinstall last update:** This menu allows you to reinstall the latest update installed on 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.



AI5389

Fig. 118

STEAM GENERATOR & CORE/ CAVITY PROBE CALIBRATION

NOTICE

Steam generator, core and cavity probe calibration must be performed each time these components are replaced. 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. 119

3. Select INSTALLER and enter PIN CODE for installer.

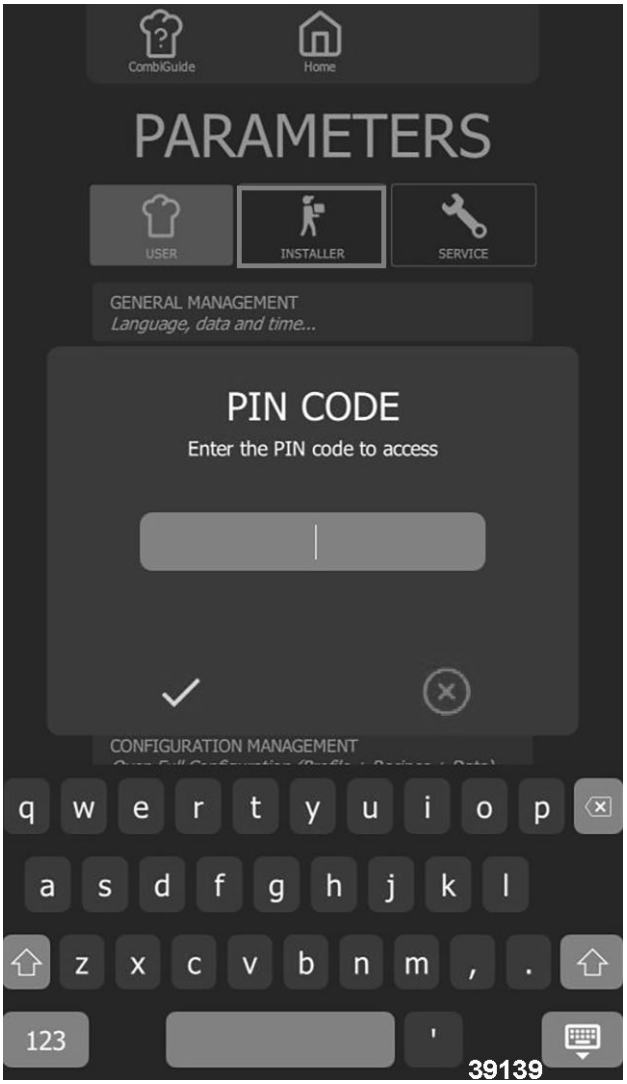


Fig. 120

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

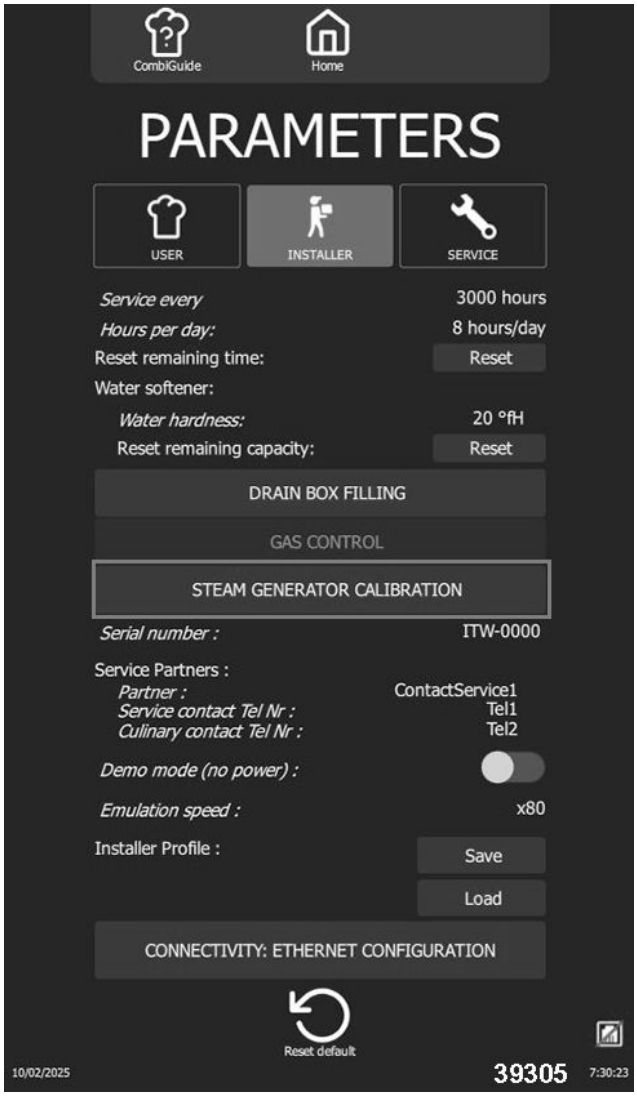


Fig. 121

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

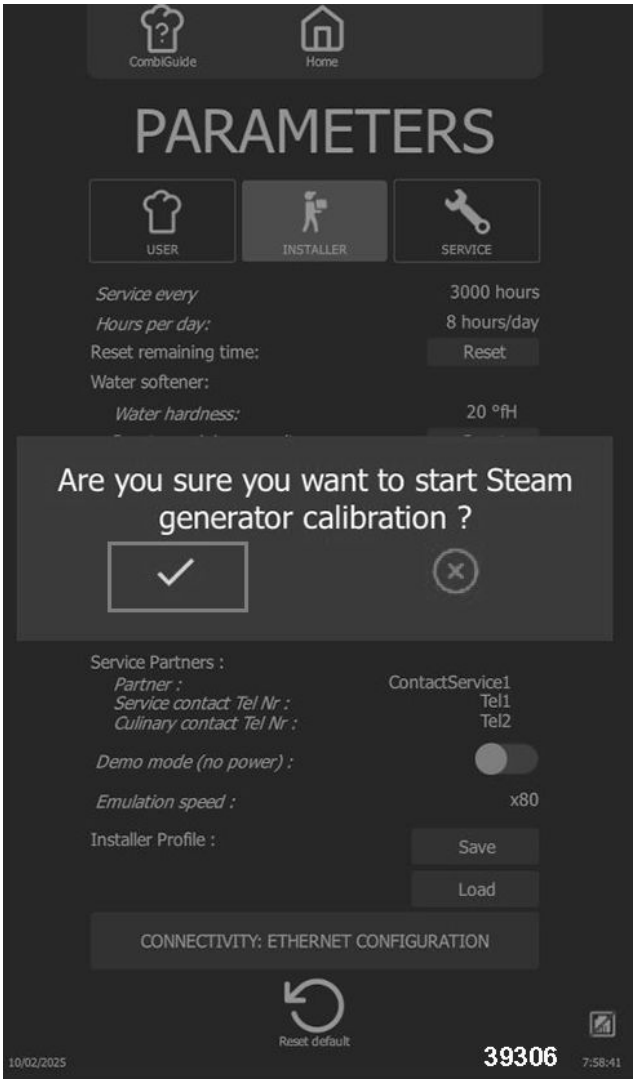


Fig. 122

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

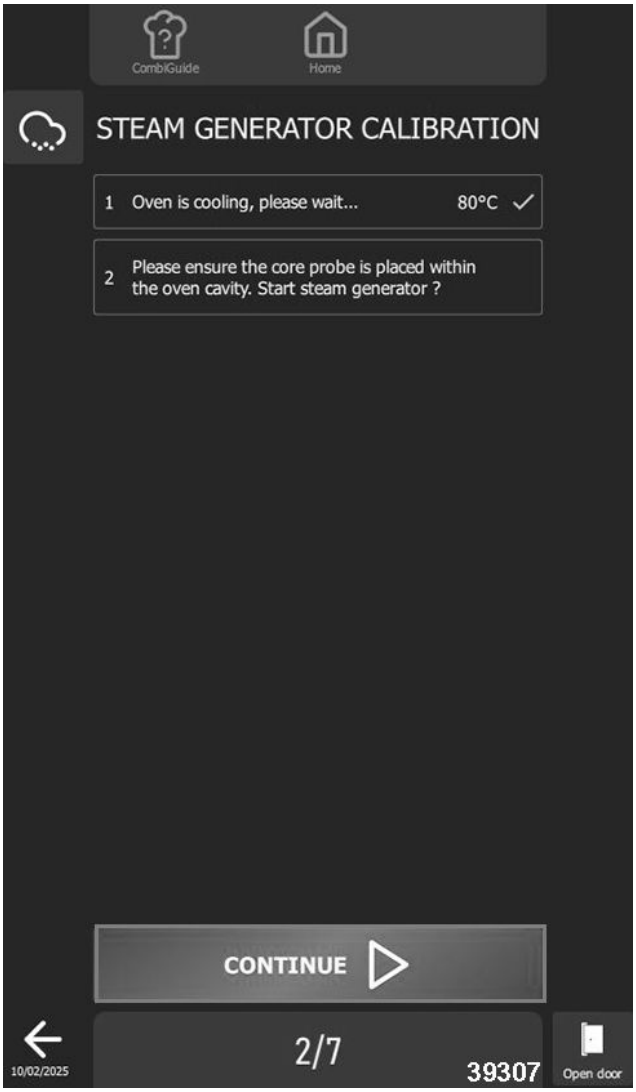


Fig. 123

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

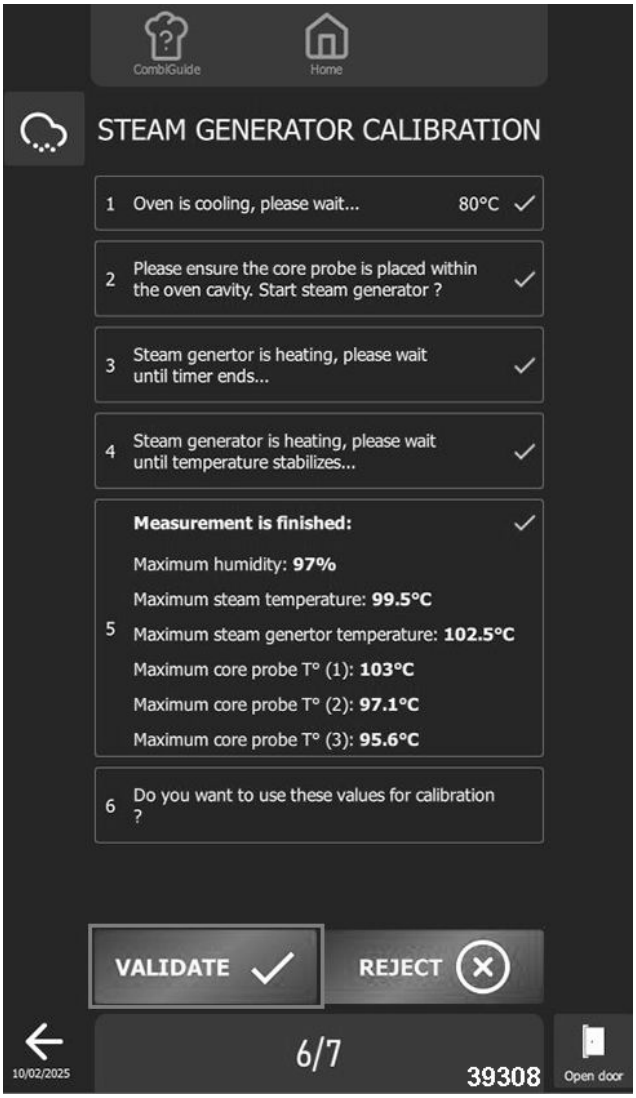


Fig. 124

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.

1. Access SD card on DISPLAY BOARD.

Using Configured SD Card

A. Insert previously used SD card into new board.

B. Start oven.

C. Accept, to copy configuration to use previous settings. OR refuse and configure the oven manually by following instructions on control panel.

New Blank SD Card

A. Insert SD card into new board.

B. Start oven.

C. Accept to configure oven.

D. Configure oven manually by following the instructions on the control panel.

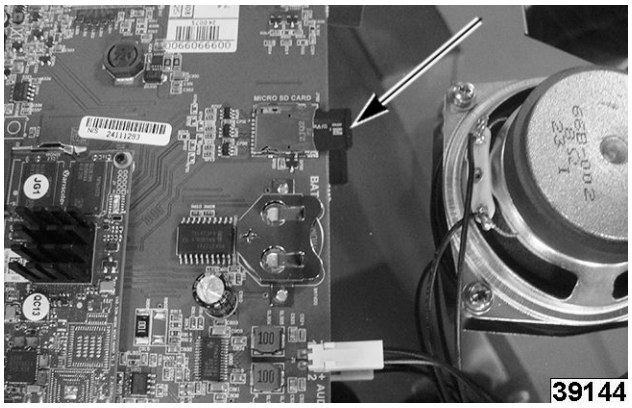


Fig. 125

ELECTRIC - HEATING ELEMENT TEST

Waiting for Andy to complete this in the lab before it can be documented.

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. 126 and Fig. 127.

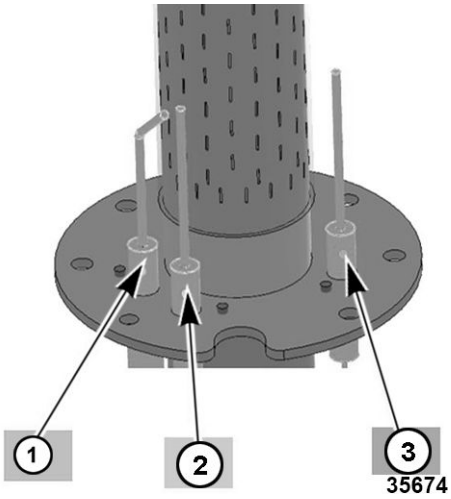


Fig. 126

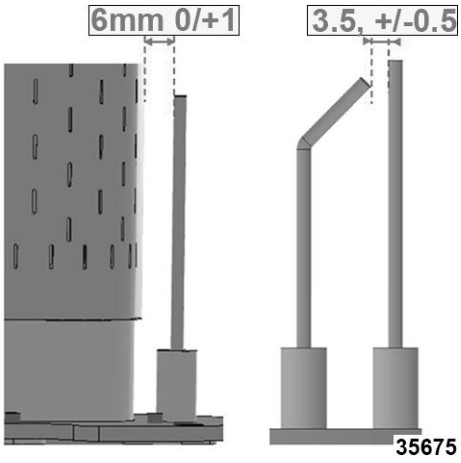


Fig. 127

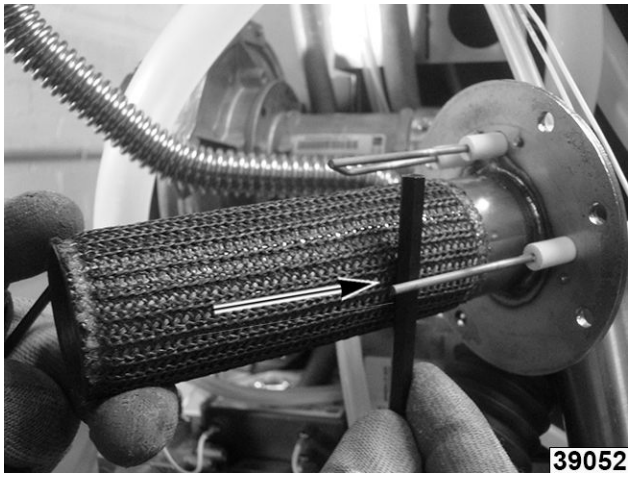


Fig. 128

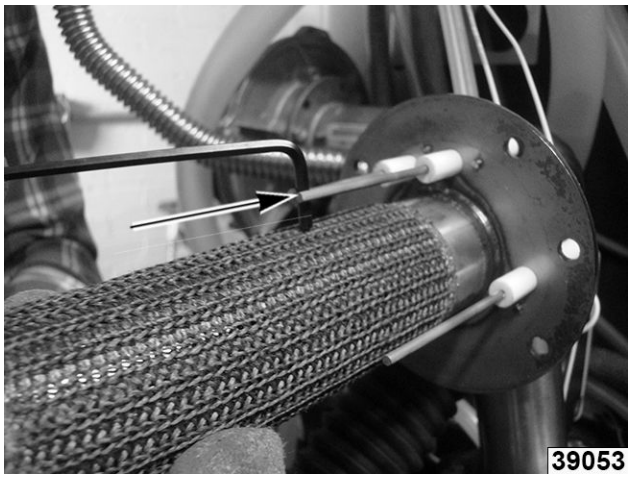


Fig. 129

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 - ADJUST GAS VALVE

NOTICE

When replacing a gas valve, length of adjustment screw must first be pre-set (Refer to: VALUES TABLE). To do this, position the screw 1mm beyond the required value, then reduce it to the desired length. This first setting can change from + / – 0.5mm. It will be modified further when adjusting the combustion.

CO2 Adjustment Screw

1. Remove LEFT PANEL.
2. Remove protective cap from adjustment screw.
3. Adjust setting tightening/loosening the screw (4mm Allen wrench) a maximum of one turn at a time (1% = 1 turn).
   - Turn clockwise to increase CO2 level and anticlockwise to decrease CO2 level.

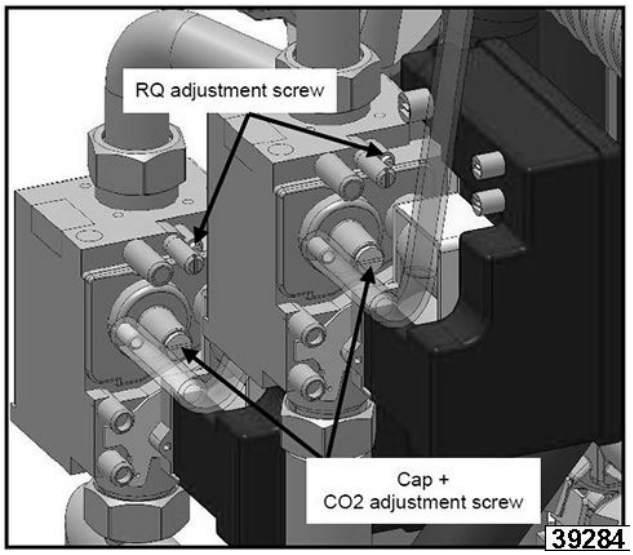


Fig. 130

4. Replace protective cap.
5. Turn oven off and allow to cool.
6. Take a sample of combustion gases by performing combustion analysis COMBUSTION ANALYSIS.

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

RQ Adjustment Screw

A. Adjust RQ adjustment screw on gas valve to set CO2 to High speed.

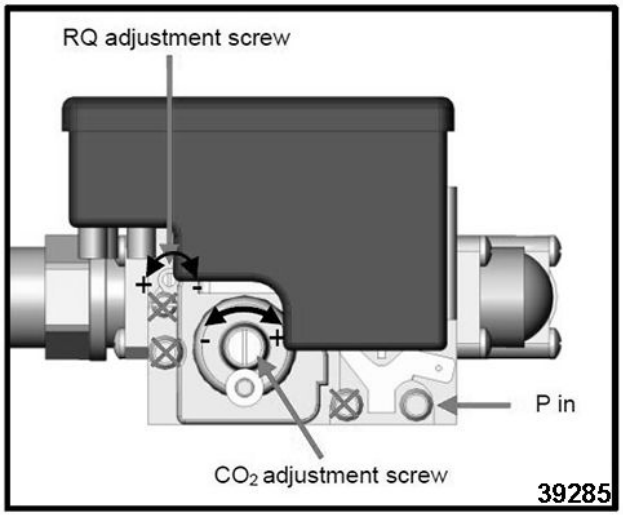


Fig. 131

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.

C. Check CO2.

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

- Clockwise to increase CO2.
- Counterclockwise to decrease CO2.

Burner Dry Heat	CO2% - SMALL			
	6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 1/1
Gas A	10.4 ±0.2	10.7 ±0.2	10.1 ±0.2	10.0 ±0.2
Gas B	11.5 ±0.2	11.5 ±0.2	11.5 ±0.2	11.7 ±0.2

Burner Dry Heat	CO2% - LARGE			
	6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 1/1
Gas A	10.3 ±0.2	10.4 ±0.2	9.9 ±0.2	10.1 ±0.2
Gas B	11.5 ±0.2	11.8 ±0.2	11.6 ±0.2	11.8 ±0.2

Burner (Generator) Steam heat	CO2% - SMALL			
	6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 1/1
Gas A	10.6 ±0.2	10.4 ±0.2	9.5 ±0.2	10.0 ±0.2
Gas B	11.4 ±0.2	11.7 ±0.2	10.9 ±0.2	11.7 ±0.2

Burner (Generator) Steam heat	CO2% - LARGE			
	6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 1/1
Gas A	10.3 ±0.2	10.3 ±0.2	9.7 ±0.2	10.1 ±0.2
Gas B	11.6 ±0.2	11.4 ±0.2	11.1 ±0.2	11.7 ±0.2

7. Verify CO rate is less than 150ppm.

VALUES		
Type	L (mm)	L (inch)
Natural Gas		
Propane		

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.

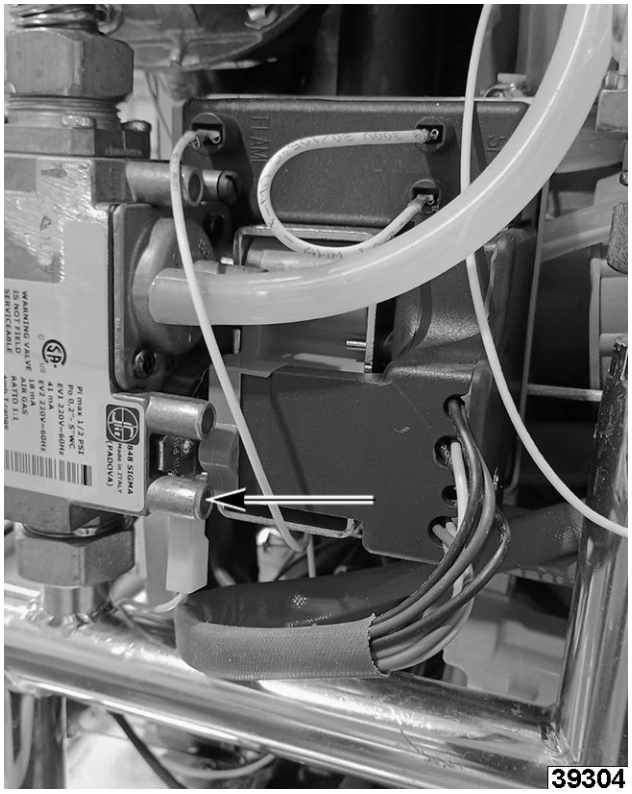


Fig. 132

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

Fig. 133

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.

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. 134

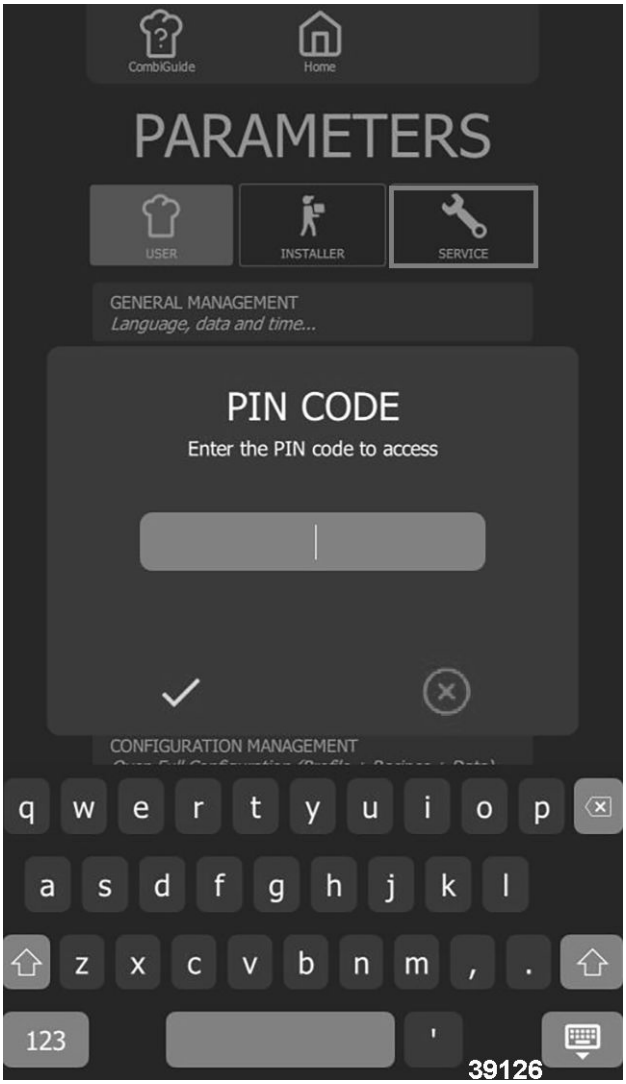


Fig. 135

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

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

Fig. 136

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.

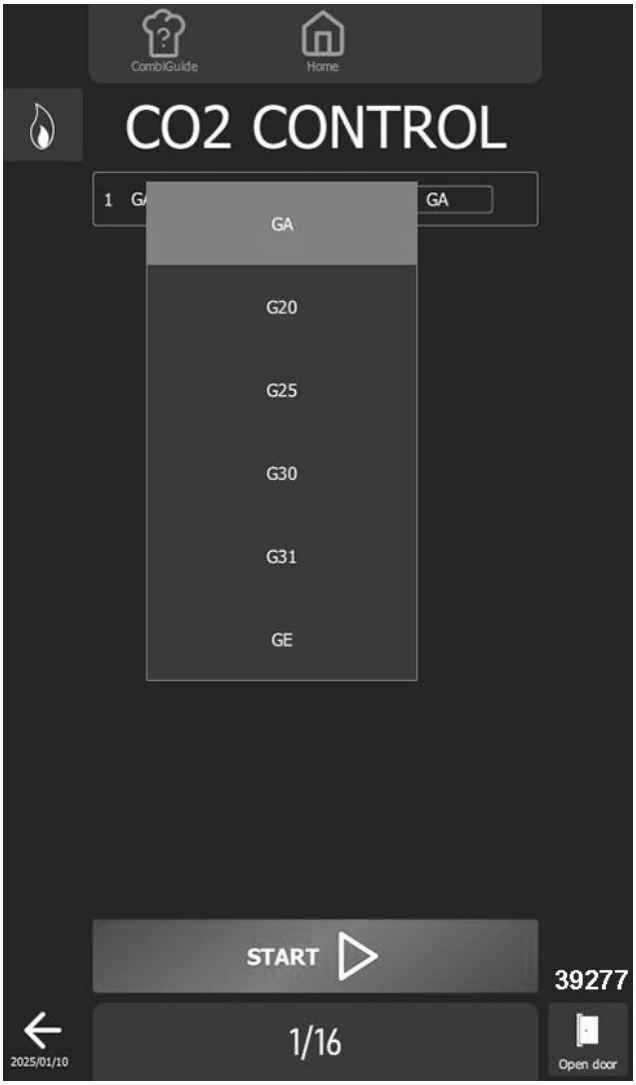


Fig. 137

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

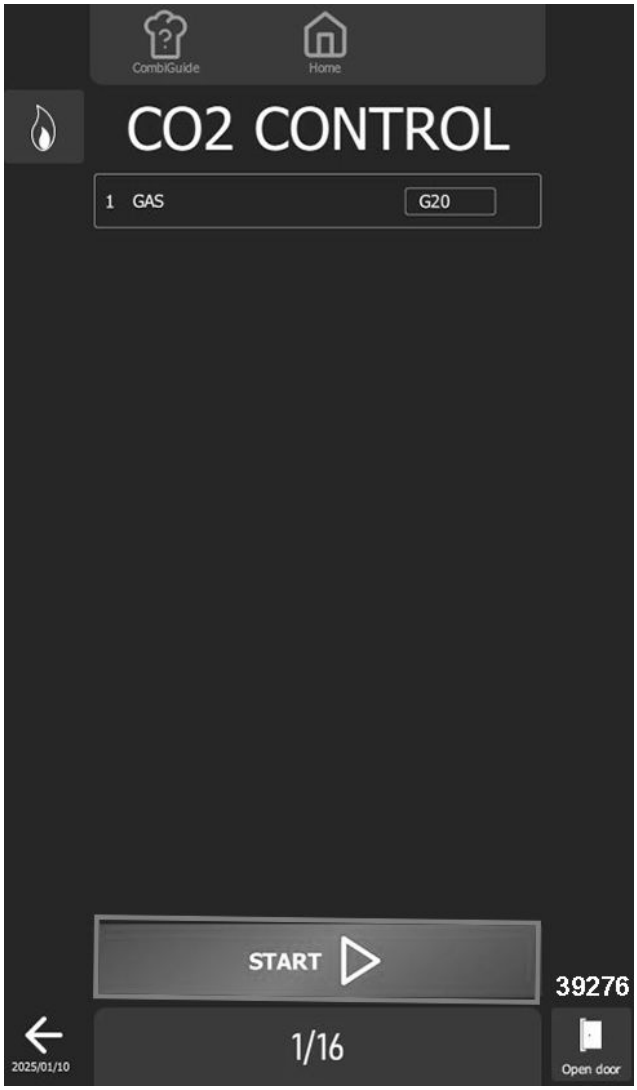


Fig. 138

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

Fig. 139

9. Open oven door.

Fig. 140

10. Select **CONTINUE**.

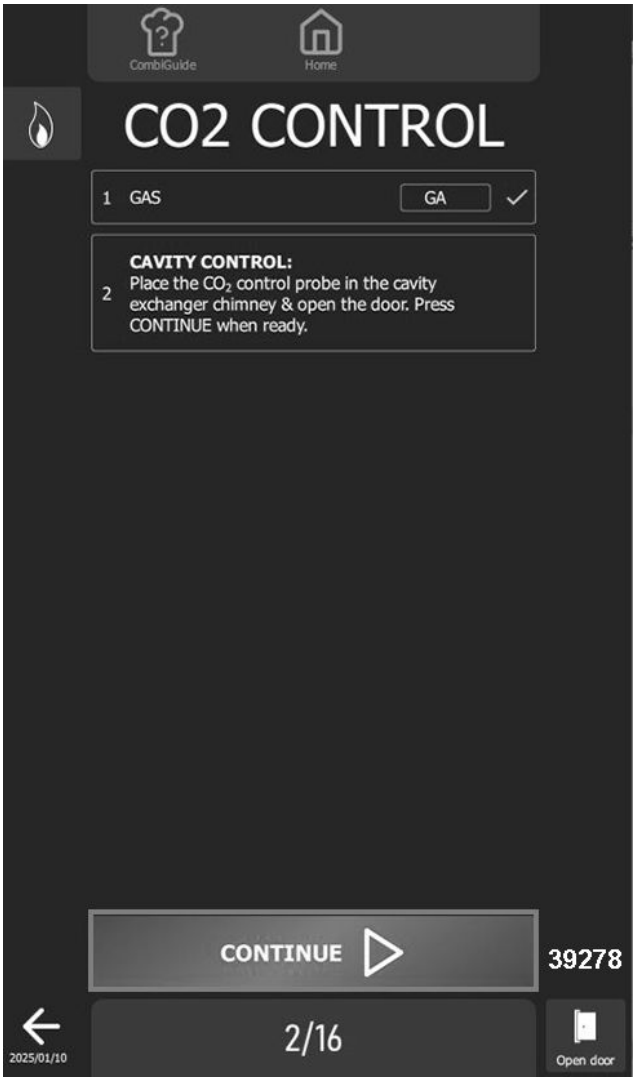


Fig. 141

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)	10.3 ±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 manometer tube in Steam generator flue gas chimney.

Fig. 142

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 RQ or/and CO2 adjustment screw 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 **Family / Type**	**Pressure** **(mbar) / (inch W.C.)**	**Natural Gas (GA)**	**ø (1/100e)**	**Propane Gas (GE)**
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 2 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.

   NOTE: 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. 143

2. Loosen gas line nut to venturi.

   Bottom Venturi Shown in Fig. 144

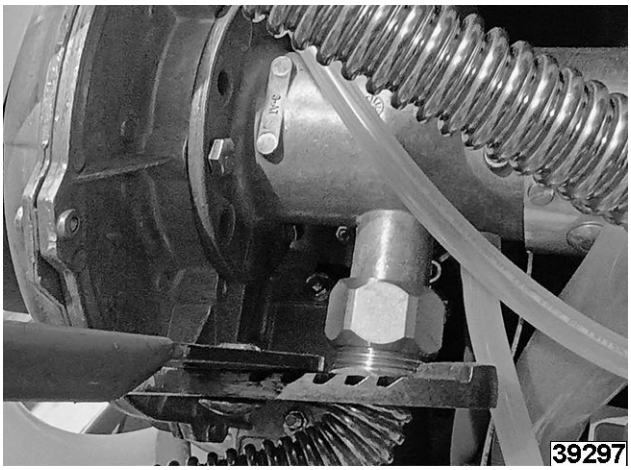


Fig. 144

3. Install orifice with both gaskets in gas line.

Fig. 145

4. Secure gas line nuts using two wrenches.

Fig. 146

- **⚠WARNING**

  Chef Combi oven only requires an orifice when usin 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.

NOTICE

Set up oven's new gas type during combustion analysis test.

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.

7. Perform test.
8. Select END to return to previous screw when display shows "Full control / adjustment achieved."
9. Fill in name plate with gas for what oven has been setup for.
10. 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.

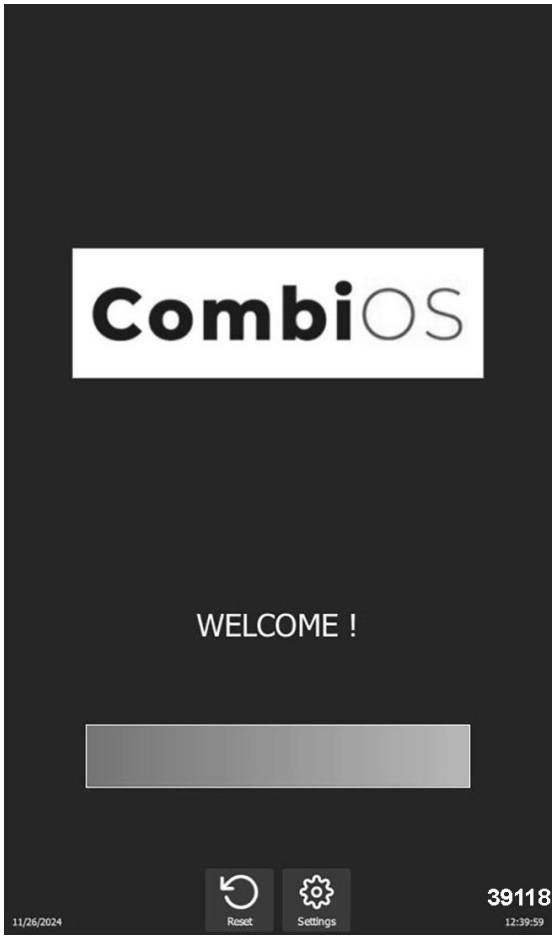


Fig. 147

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 PINcode 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. 148

Fig. 149

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.

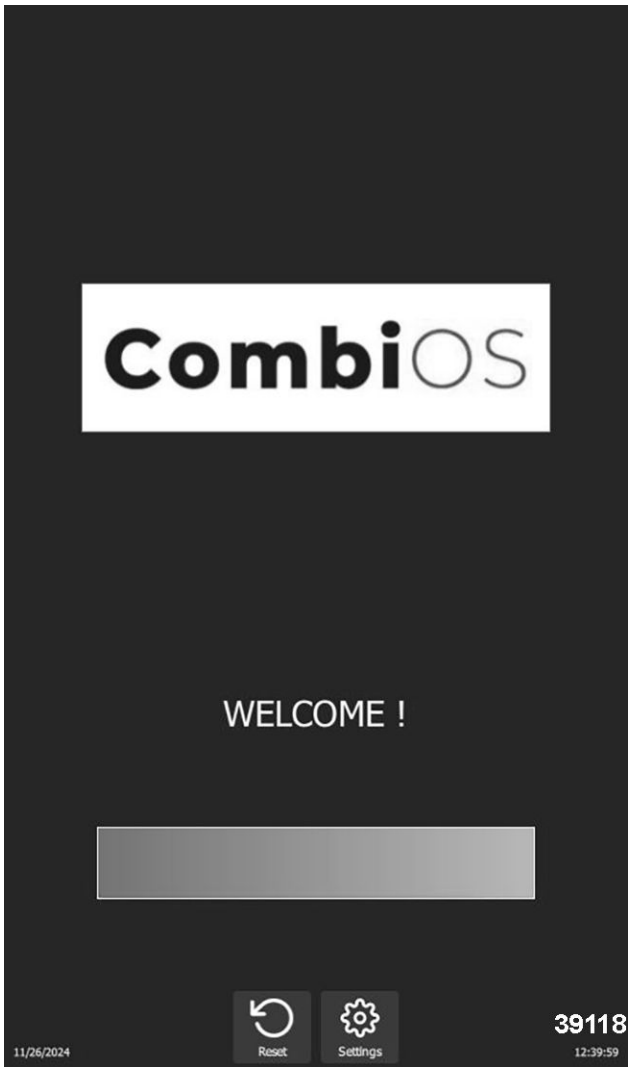


Fig. 150

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

Fig. 151

4. Select desired language.

5. PROGRAMMING

WATER TREATMENT CAPACITY

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

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

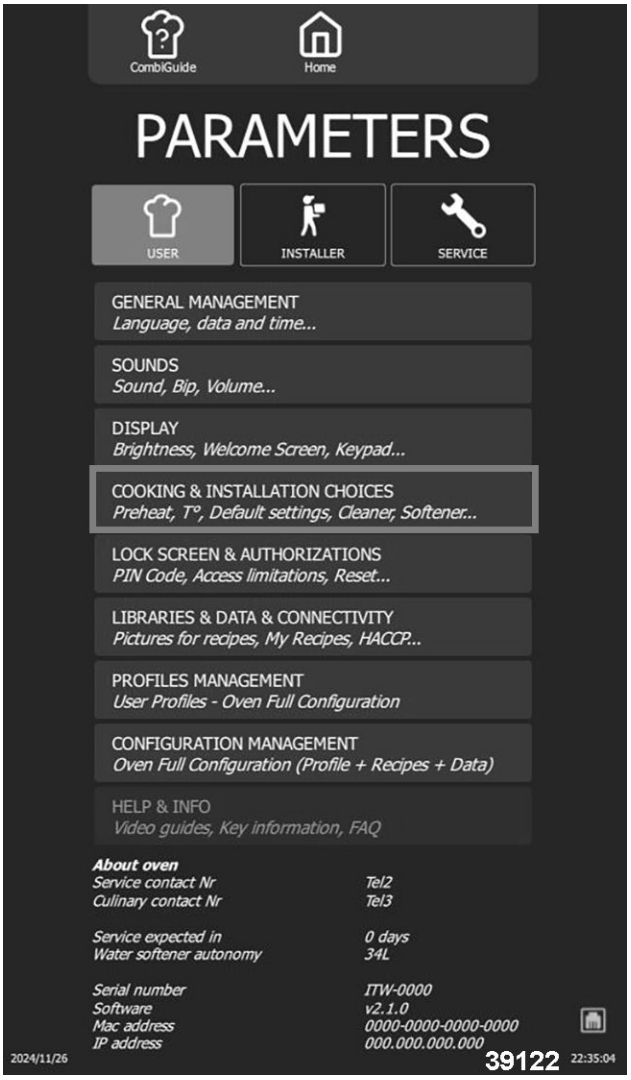


Fig. 153

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

Fig. 154

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

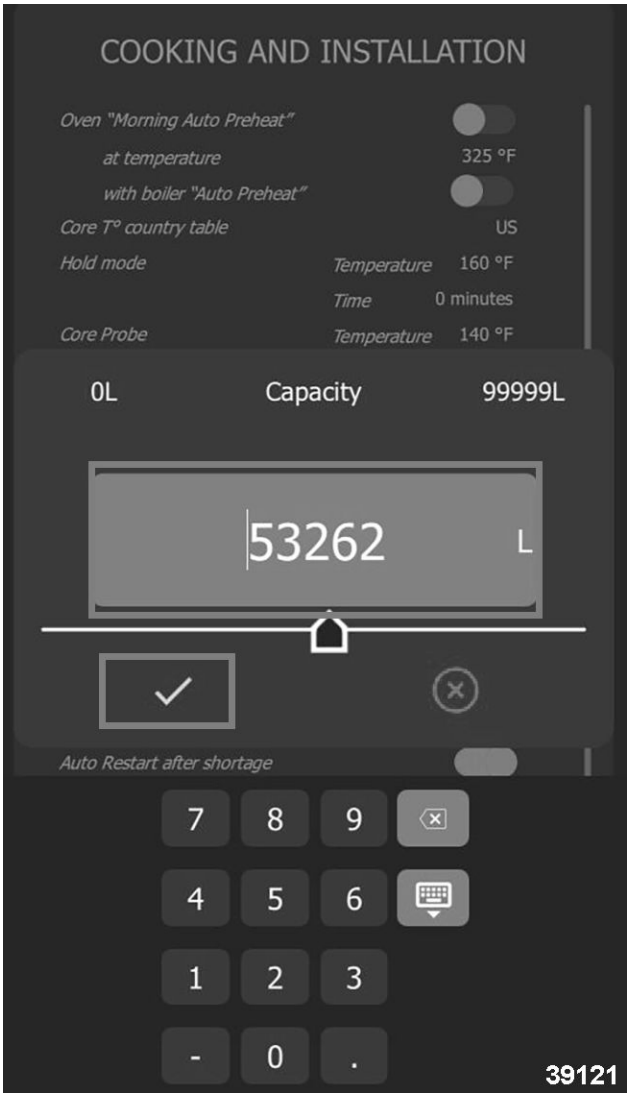


Fig. 155

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. 156

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

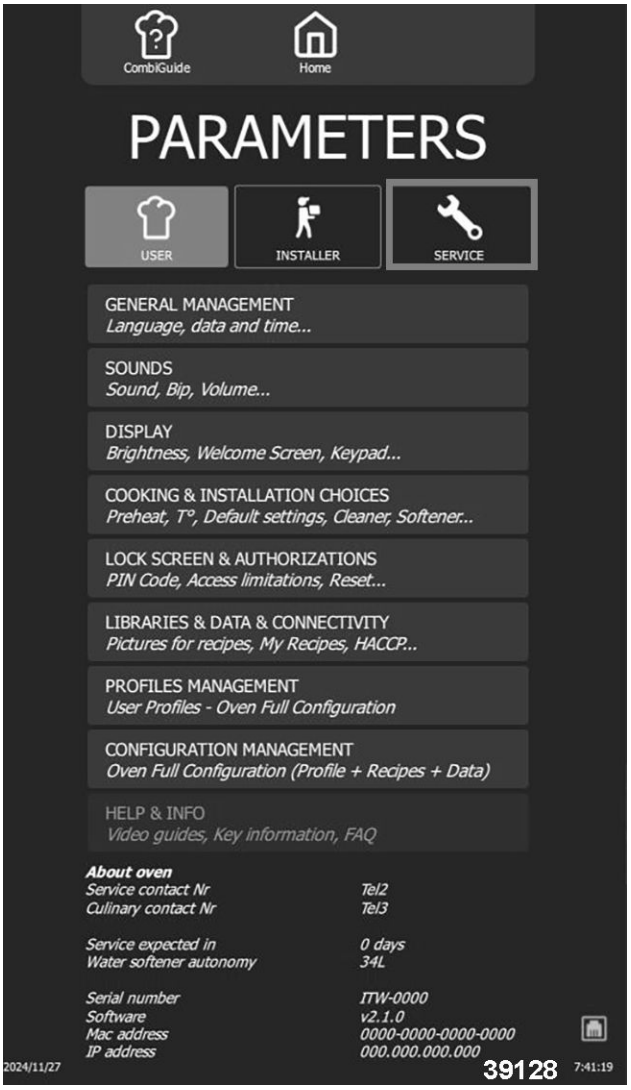


Fig. 157

3. Enter PIN CODE and **CONFIRM « □ »**.

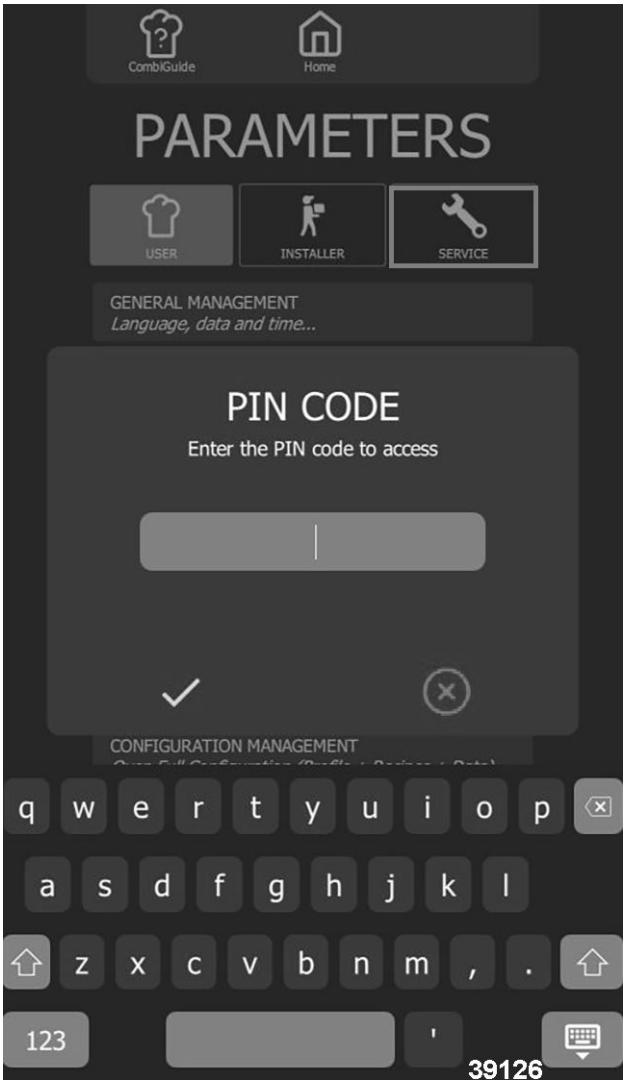


Fig. 158

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

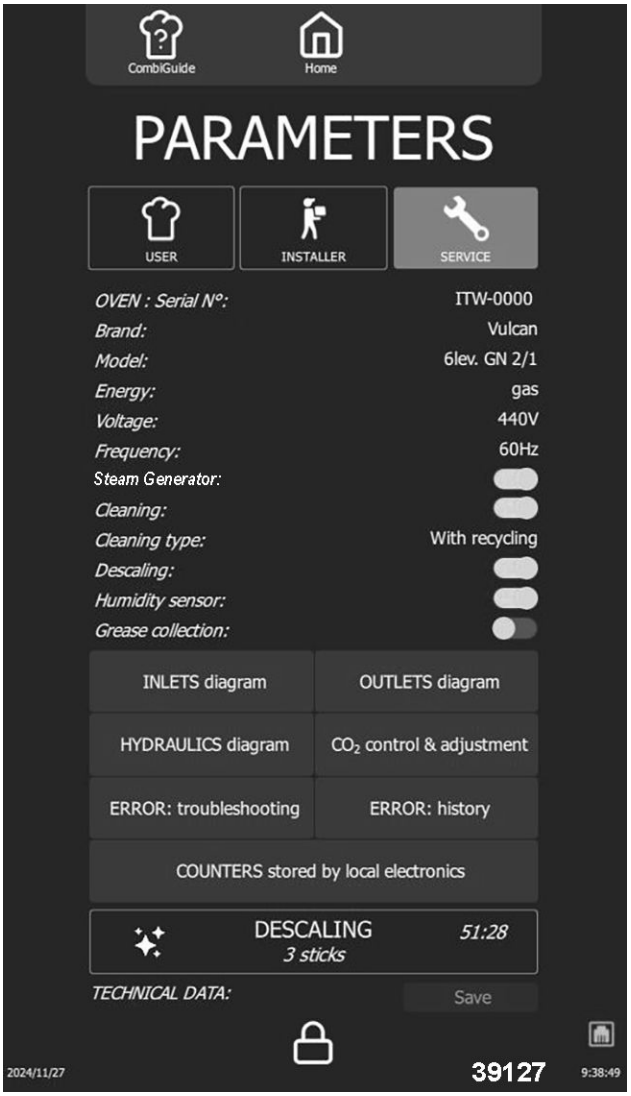


Fig. 159

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.

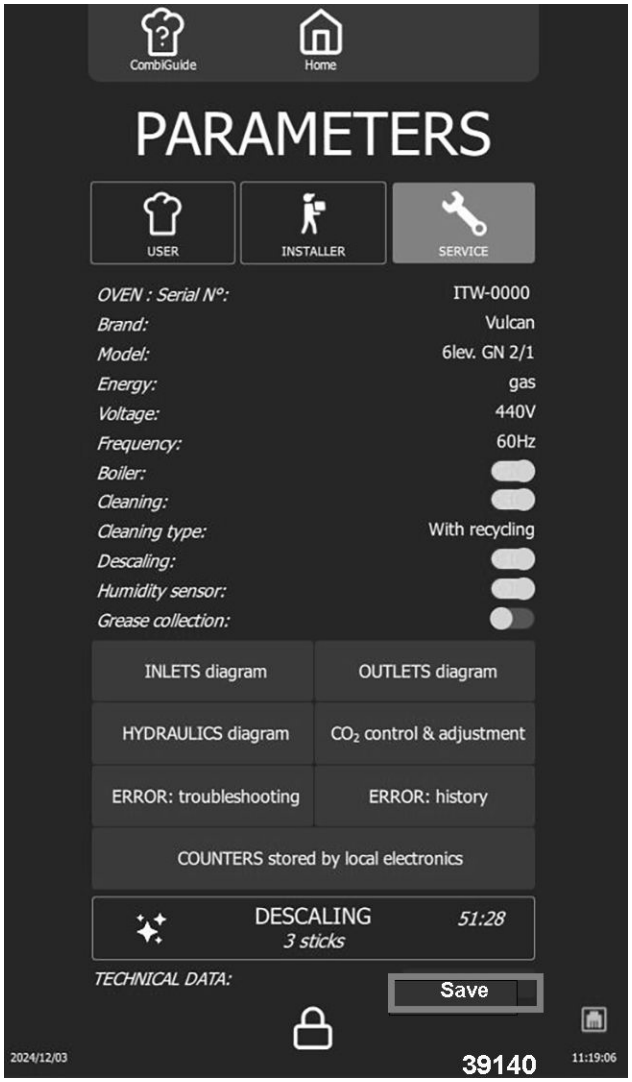


Fig. 160

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. 161

2. Select **INSTALLER** on the **PARAMETERS** page and enter PIN CODES.

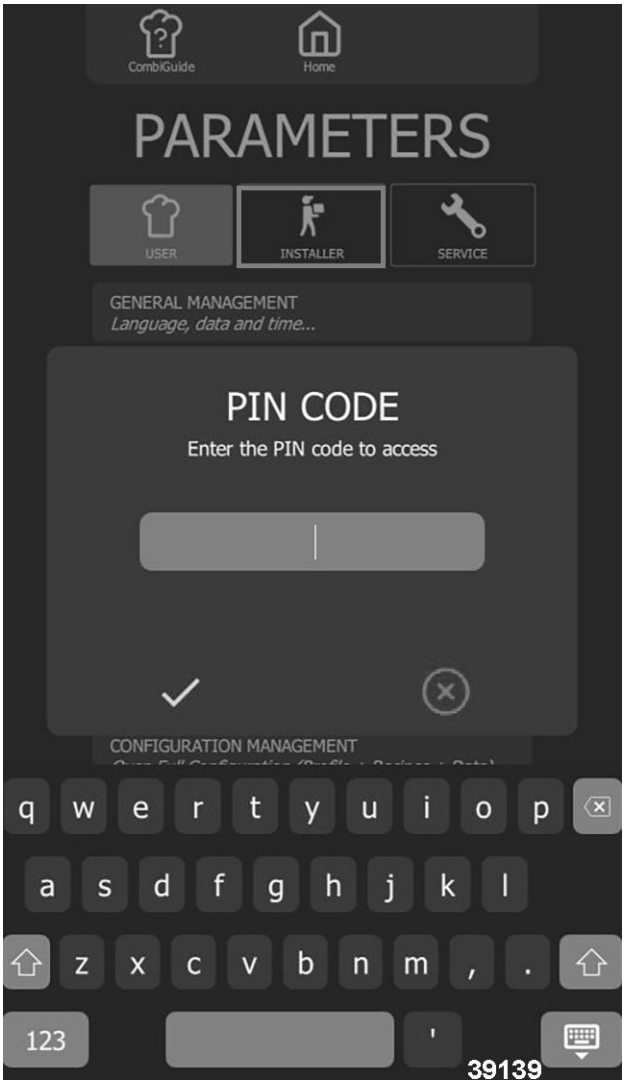


Fig. 162

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

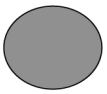
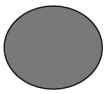
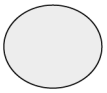
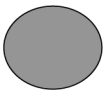
1. Reset counter.

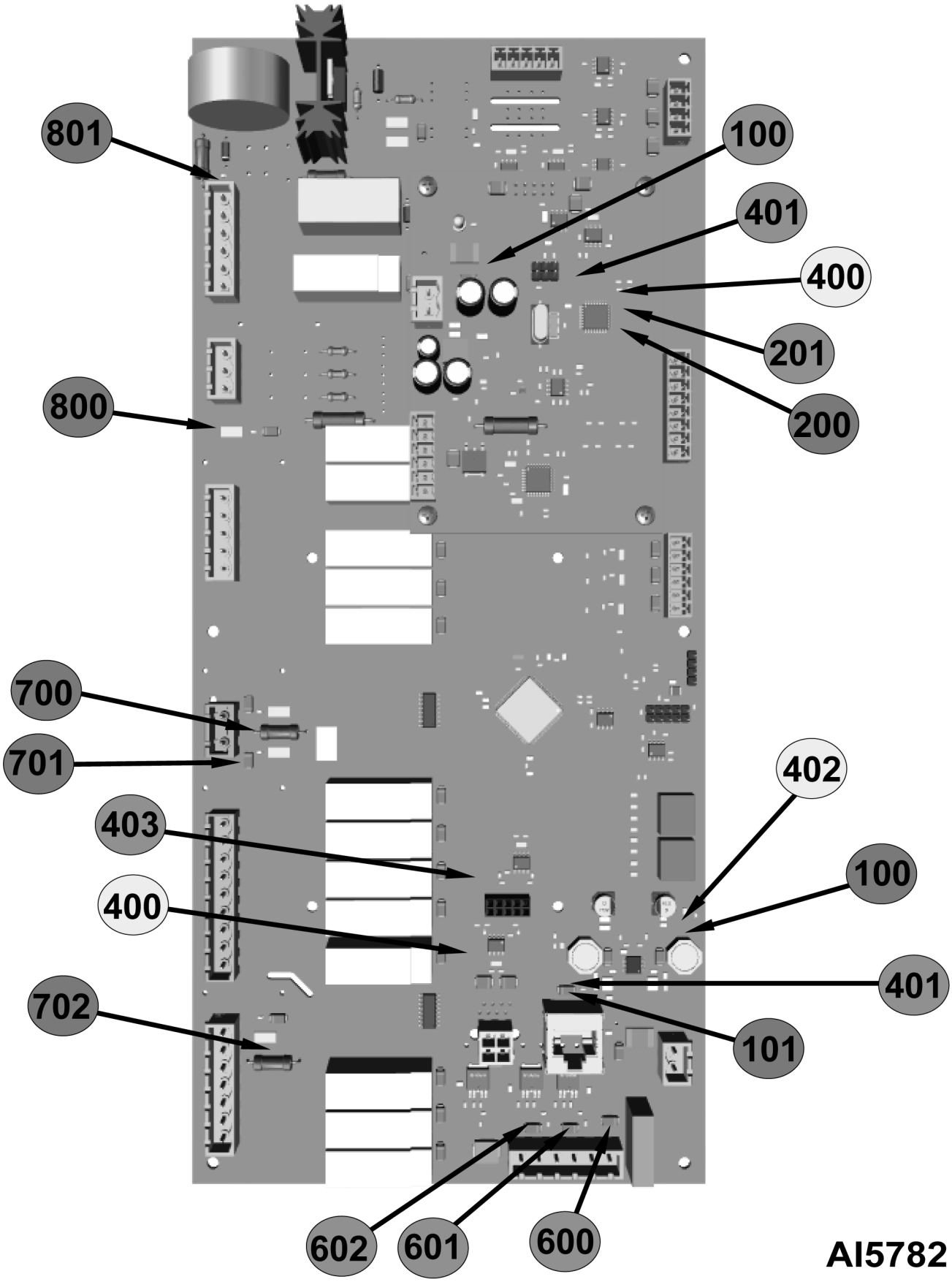
2. Press **"□ "** icon to confirm.

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

6. ELECTRIC OPERATION

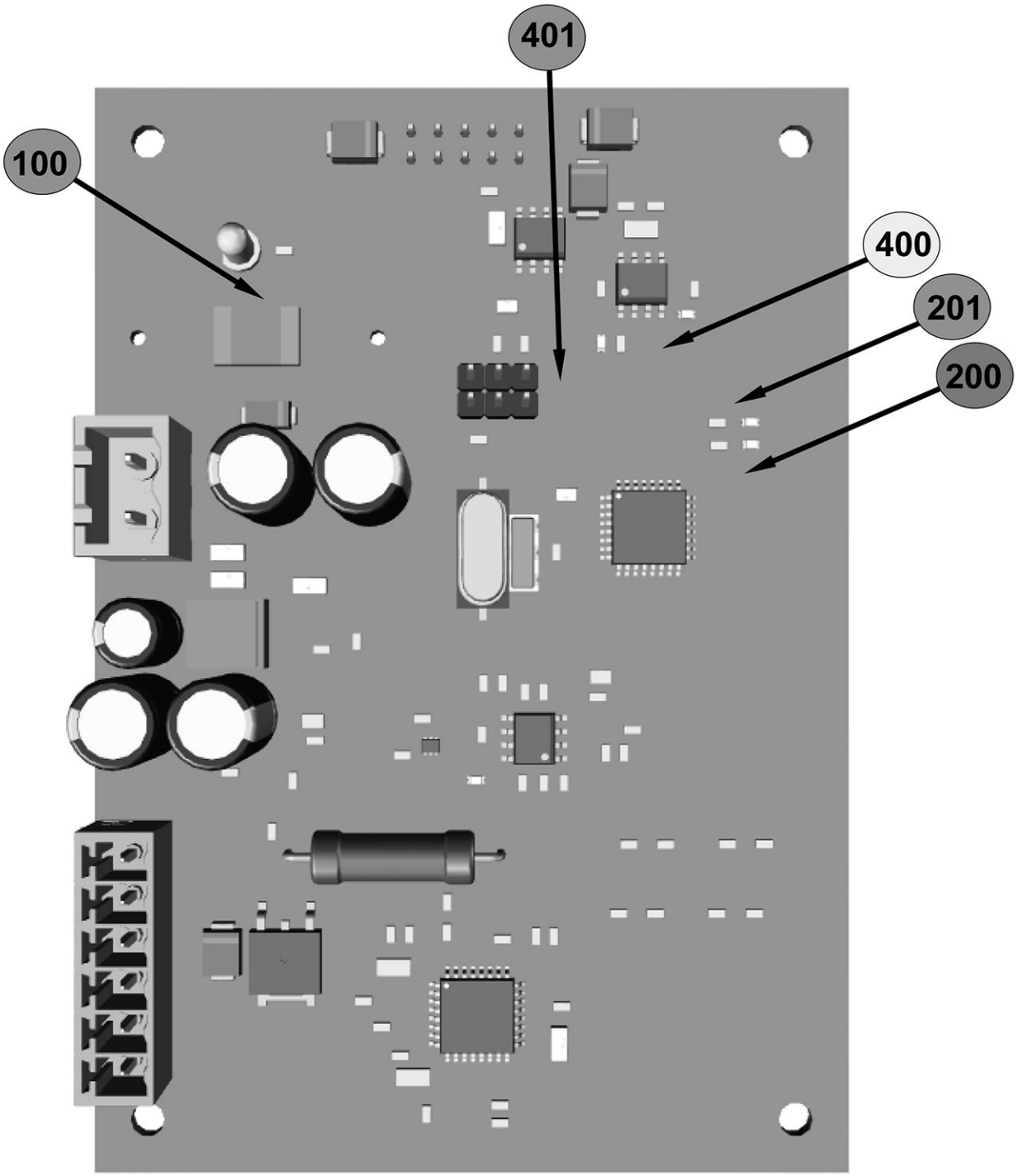
BOARD LEDS

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



MAIN BOARD, HUMIDITY BOARD

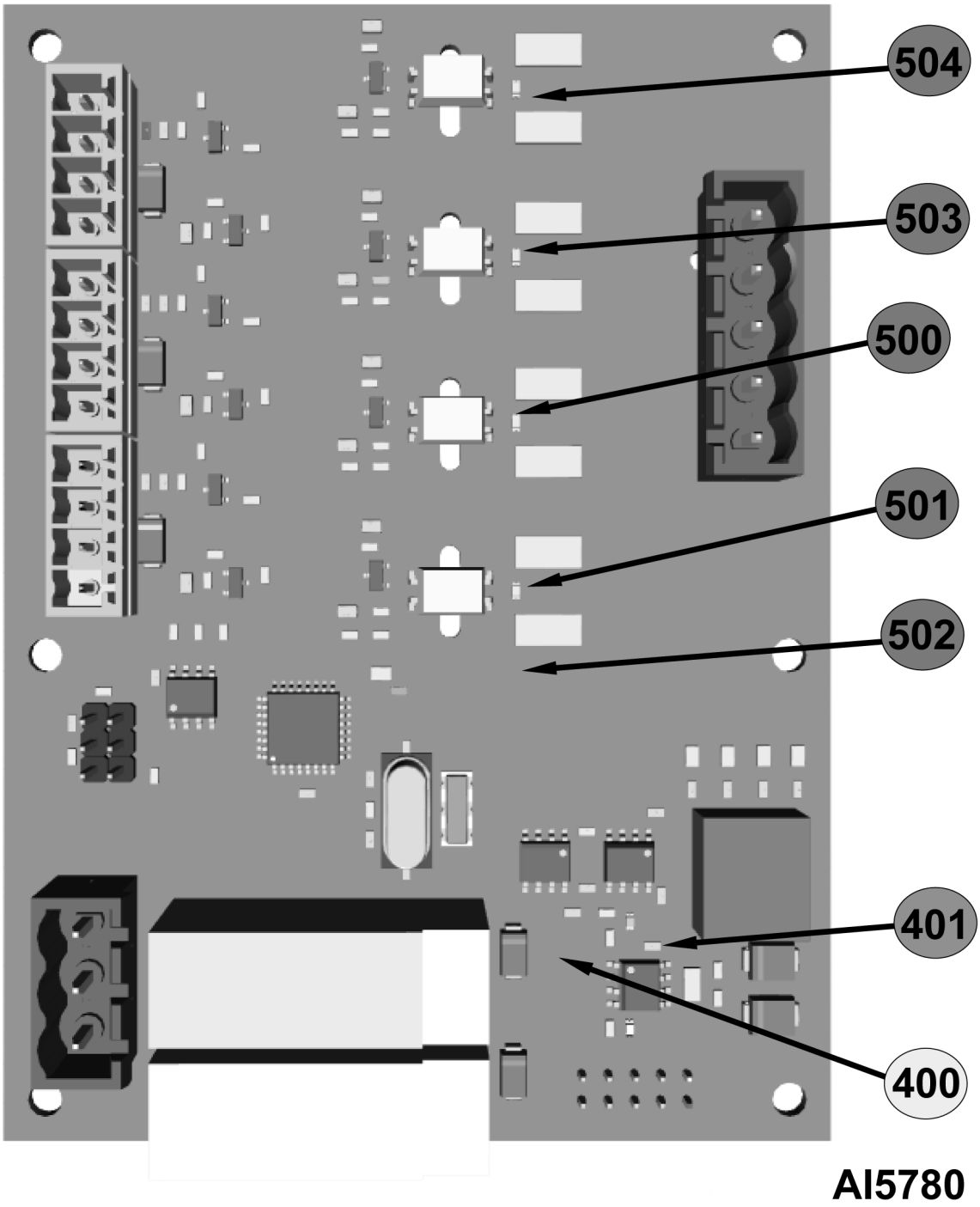
MAIN BOARD			
LED	**Color**	**Status**	**Designation**
100	Green	On - Permanent	3.3 Volt voltage present.
101	Red	On - Permanent	5 Volt voltage present.
400	Yellow	Flashing	Tx signals RS485 communication.
401	Green	Flashing	Tx signals RS485 communication.
402	Yellow	Flashing	Tx signals RS485 communication.
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.

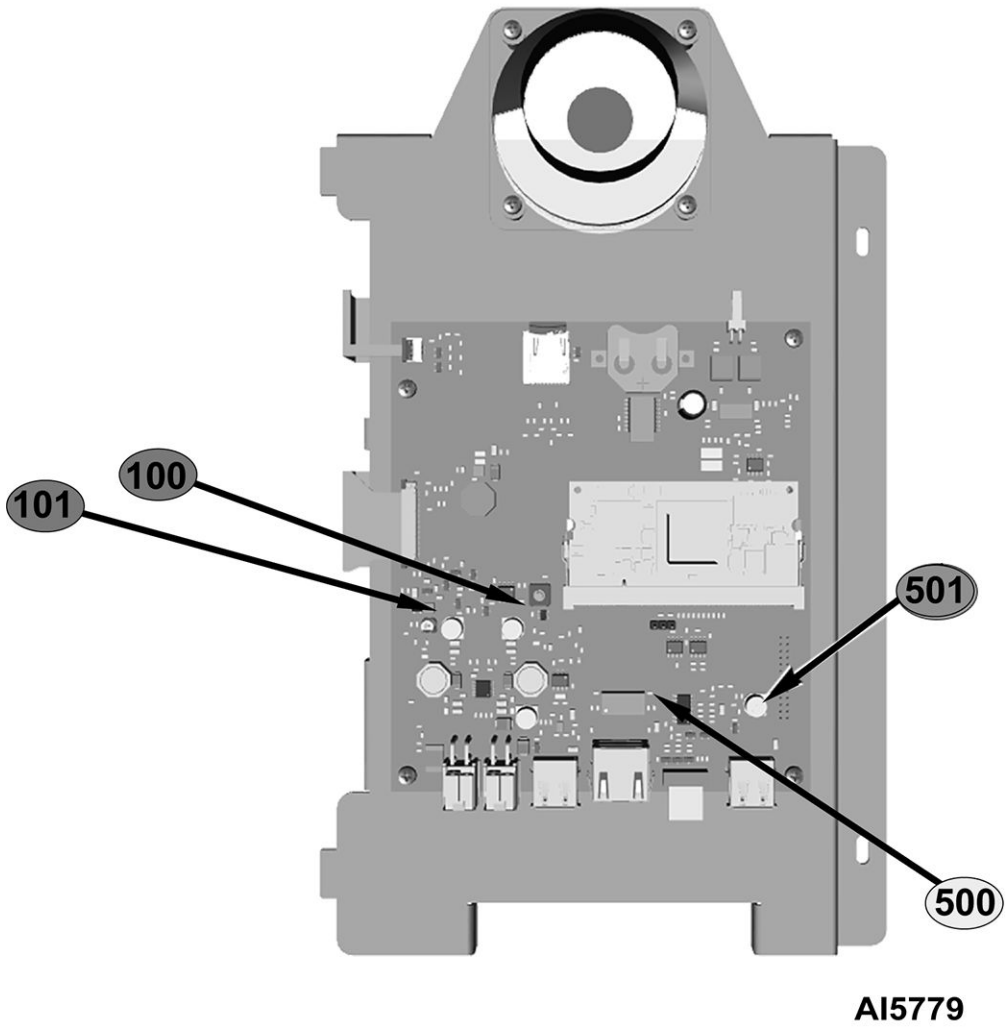
HUMIDITY (Ahu) BOARD			
LED	**Color**	**Status**	**Designation**
200	Red	Flashing then Off	Indicates incorrect operation of the humidity probe.
201	Green	Flashing then Permanent	Indicates correct operation of the humidity probe.
400	Yellow	Flashing	RS485 communication Tx signals - Transmit.
401	Green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



GAS BOARD

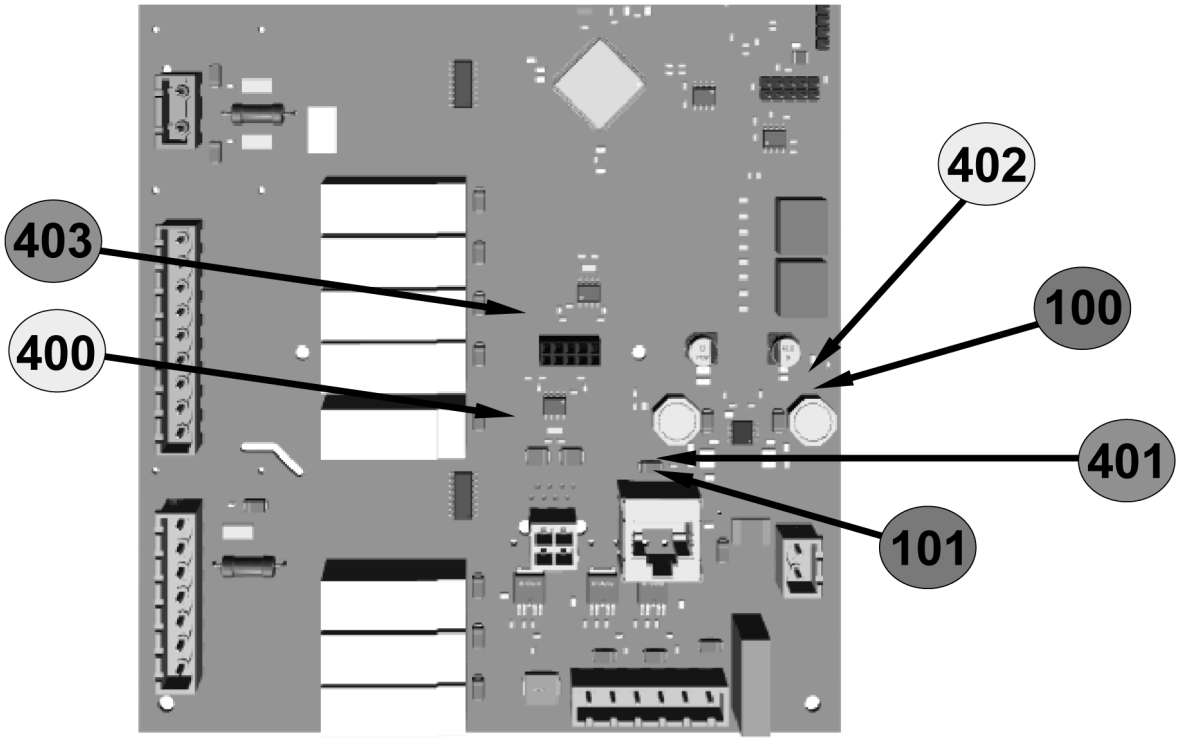
GAS (Aag) BOARD			
LED	**COLOR**	**STATUS**	**DESIGNATION**
400	Yellow	Flashing	Tx signals RS485 communication.
401	Green	Flashing	Tx signals RS485 communication.
500	Red	Permanent	Presence of gas in the gas steam generator burner.

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.

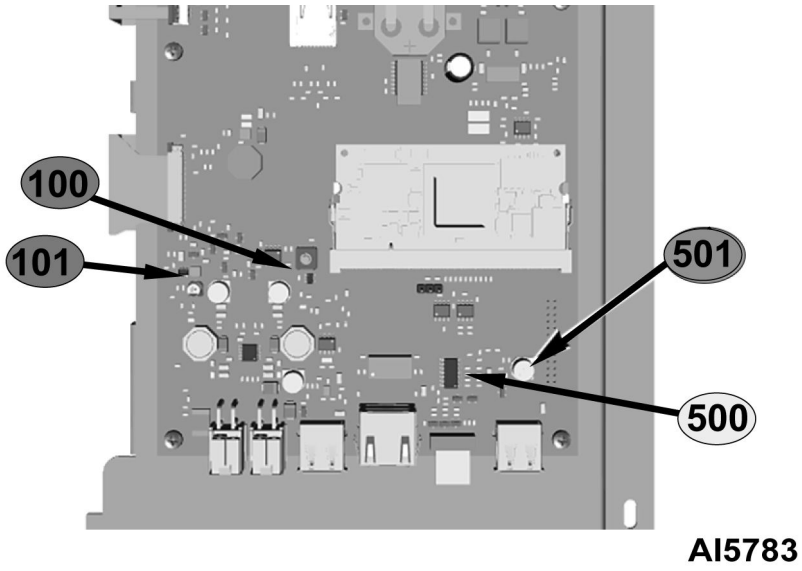


AI5785

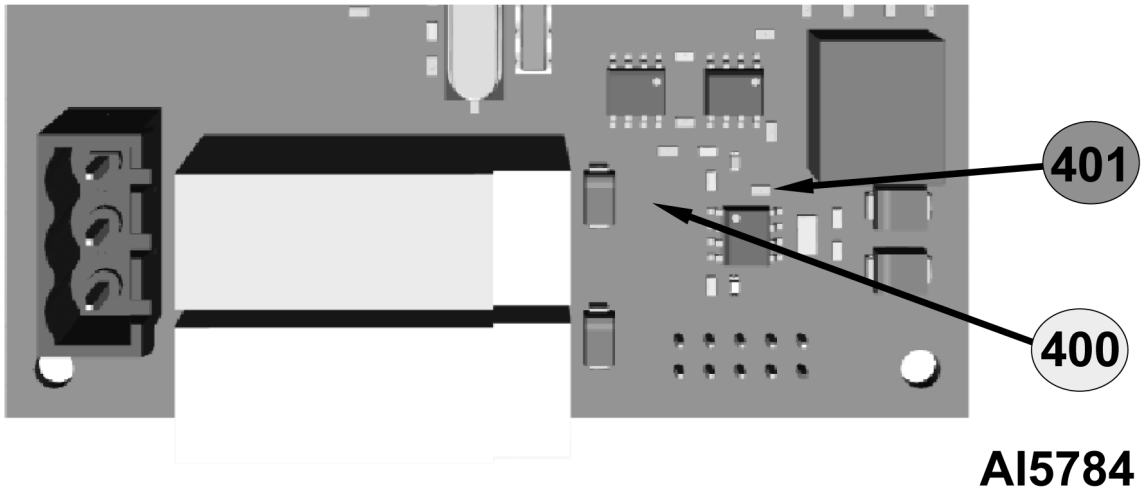
COMMUNICATION LEDS MAIN BOARD

(Ai) Interface Board (Fig. 172)				(Aa) Main Board (Fig. 171)				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. 172)				(Aa) Main Board (Fig. 171)				Diagnostics	Solutions
RED	RED	YELLOW	GREY	GREY	GREY	RED	RED	Interconnecting Cable between Interface (Ai) board and Main (Aa) assembly faulty.	Replace interconnecting cable.

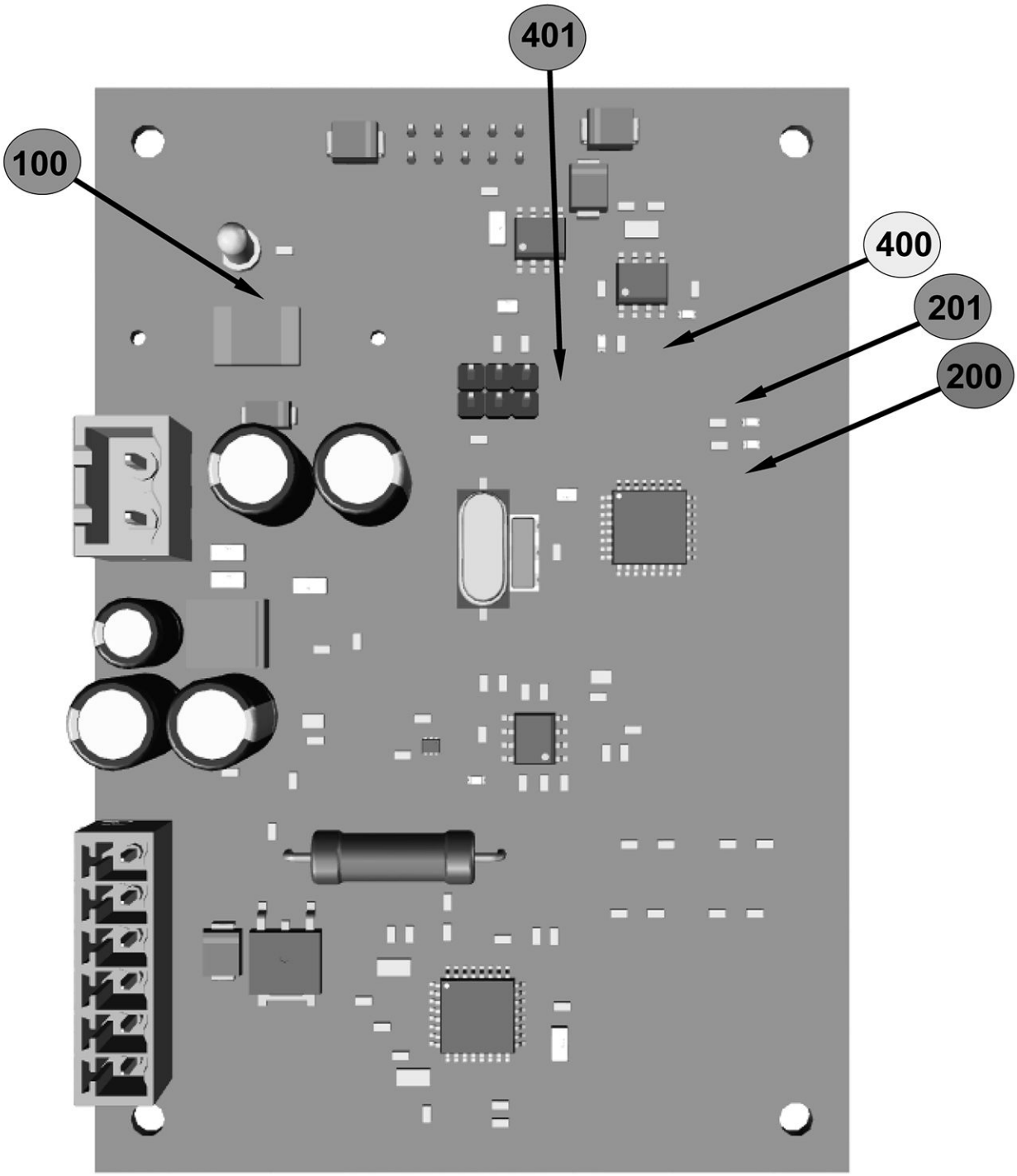


INTERFACE BOARD



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



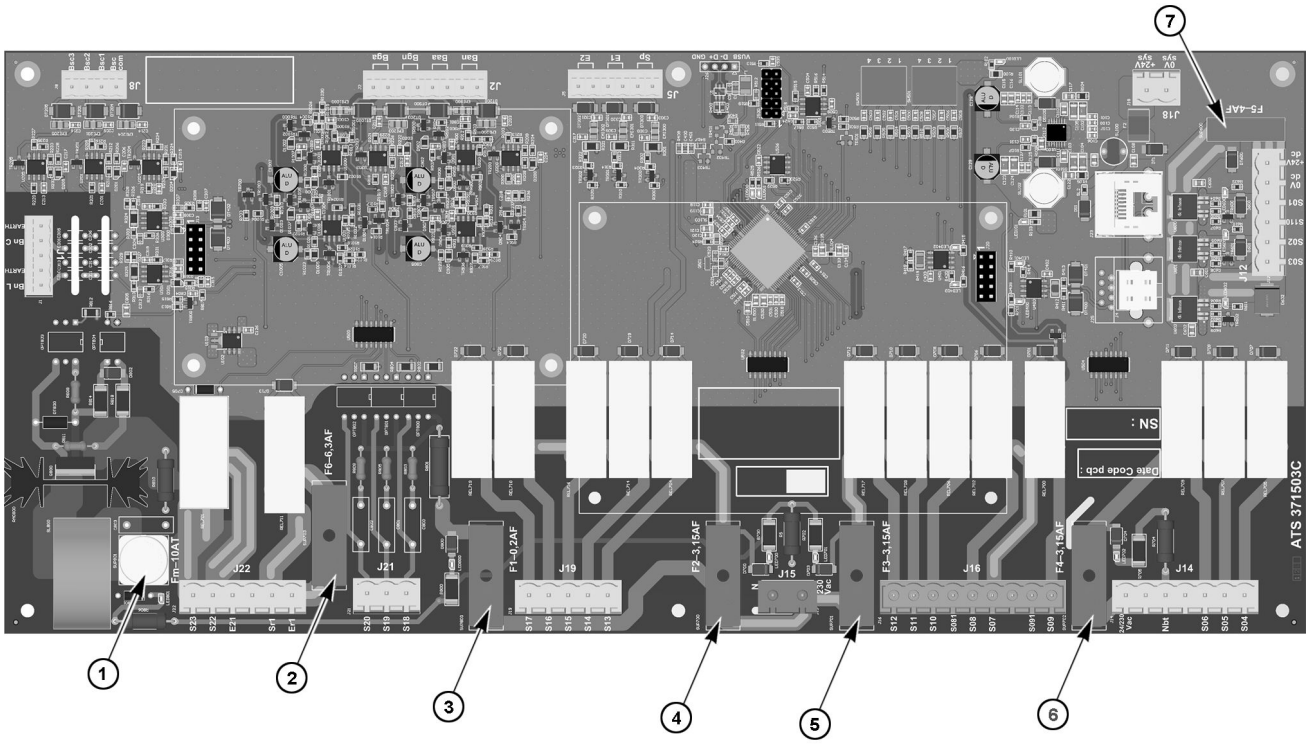
COMMUNICATION LEDs HUMIDITY BOARD

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.

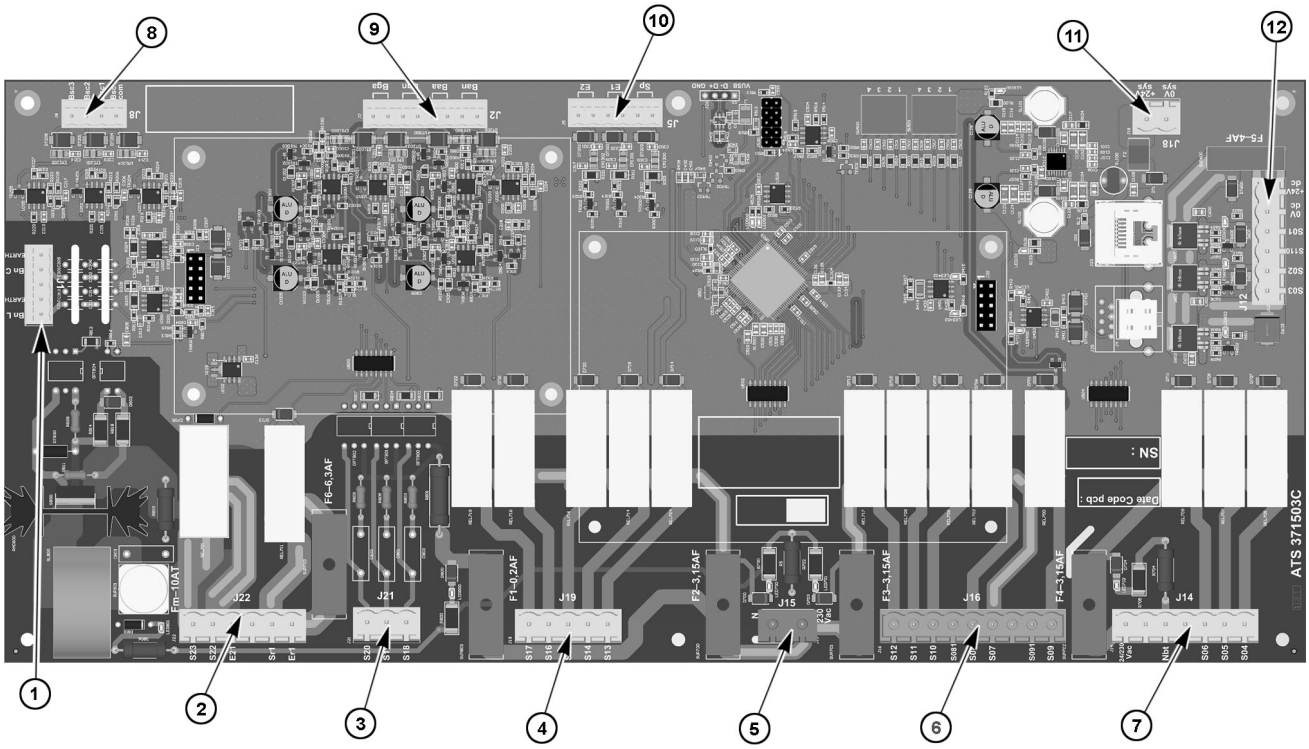
BOARD CONNECTOR / FUSE LOCATIONS



39288-2

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

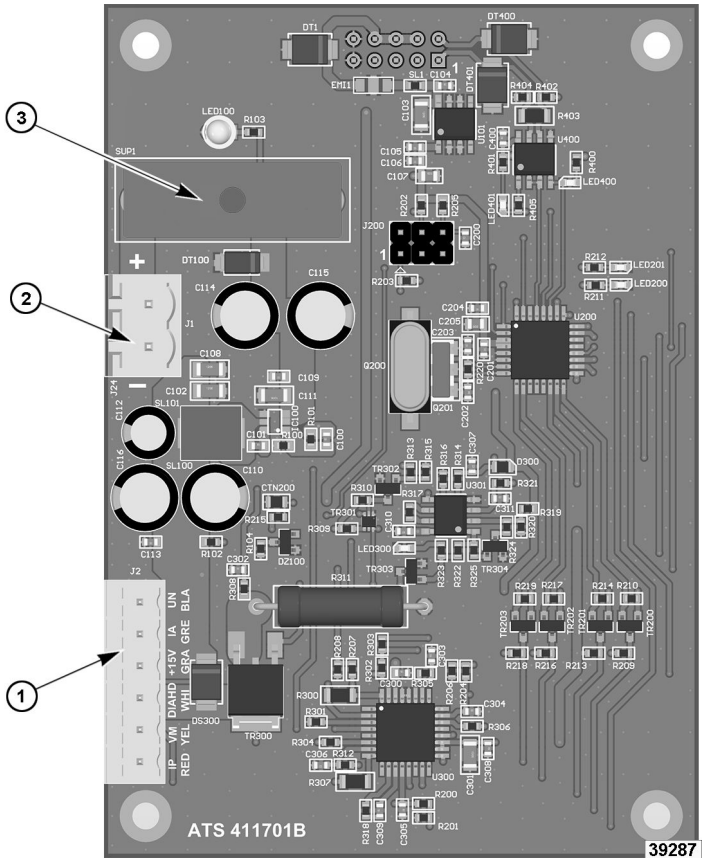
ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
1	J1	1	Green/ Yellow	Earth	Checks water level in steam generator.	-
		2	Orange	BnC		
		3	NC	-		

ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		4	Green/ Yellow	Earth	Checks the water level in wash tank.	
		5	Orange	BnL		
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	Green	Yrc-S20	Activates the injection solenoid valve.	230VAC with neutral
		2	Brown	Yrc-S19	Activates the cooling solenoid valve.	
		3	Green	Yc-S18	Activates the condenser solenoid valve.	
4	J19	1	Reserve	S17	Reserved	230VAC with neutral
		2	Brown	Ytd-S16	Activates the tablet dissolution solenoid valve.	
		3	Green	Ys -S15	Activates the spray hose solenoid valve.	
		4	-	-	-	
		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
		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

ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		3	Green	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	Purple	Mtv1-S08	Activates technical ventilation.	230VAC with Neutral
		6	Orange	Aag 230V-S07	Not used in electric ovens. Supplies gas board for gas ovens.	230VAC with Neutral
		7	-	-	-	-
		8	Orange	XeA-S091	Controls energy saver.	230VAC with Neutral
			W1-3		Controls the rotation speed of the hood.	
		9	Brown	S09	Activates the power contactor(s) Kp.	230VAC with Neutral
7	J14	1	Purple	24/230VAC	Supplies 120VAC pump.	120VAC with Nbt
		2	-			
		3	Blue	Nbt	Common pump supply 120VAC (neutral).	120VAC with 24/230VAC
		4	-			
		5	Green	Mdg	Activates descaling pump 120VAC.	120VAC with Nbt
		6	Brown	Mvm	Activates 120VAC cavity drain pump.	120VAC with Nbt
		7	Purple	Mvg	Supplies 230VAC outputs.	120VAC with Nbt
8	J8	1	Yellow	GND	Food temperature control (3 levels).	Value between 100 Ohms (35°F) 2 White PT100Bsc1 and 212 Ohms (572°F)
		2	White	PT100Bsc1		
		3	Red	PT100Bsc2		
		4	Black	PT100Bsc3		
9	J2	1	White	GND	Measures ambient temperature in cavity (control input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F)
		2	White	Ban		

ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
		3	Red	GND	Measures cavity temperature (safety input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F)
		4	Red	Baa		
		5	White	GND	Measures steam generator temperature (control input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F)
		6	White	Bgn		
		7	Red	GND	Measures steam generator temperature (safety input).	Value between 100 Ohms (35°F) and 212 Ohms (572°F)
		8	Red	Bga		
10	J5	1	Blue	Sp	Control the closing of the door.	
		2	Brown	Sp		
		3		E1	Grease collection pressure switch option.	Normally Closed Contact
		4		E1		
		5		E2	Not used.	
		6		E2		
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).	
			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

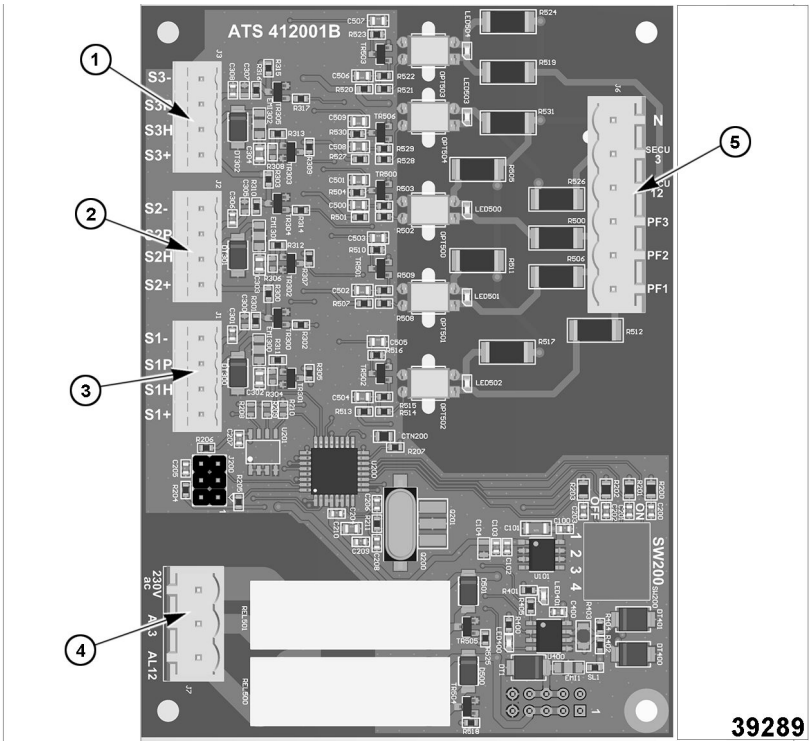
1



HUMIDITY BOARD

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

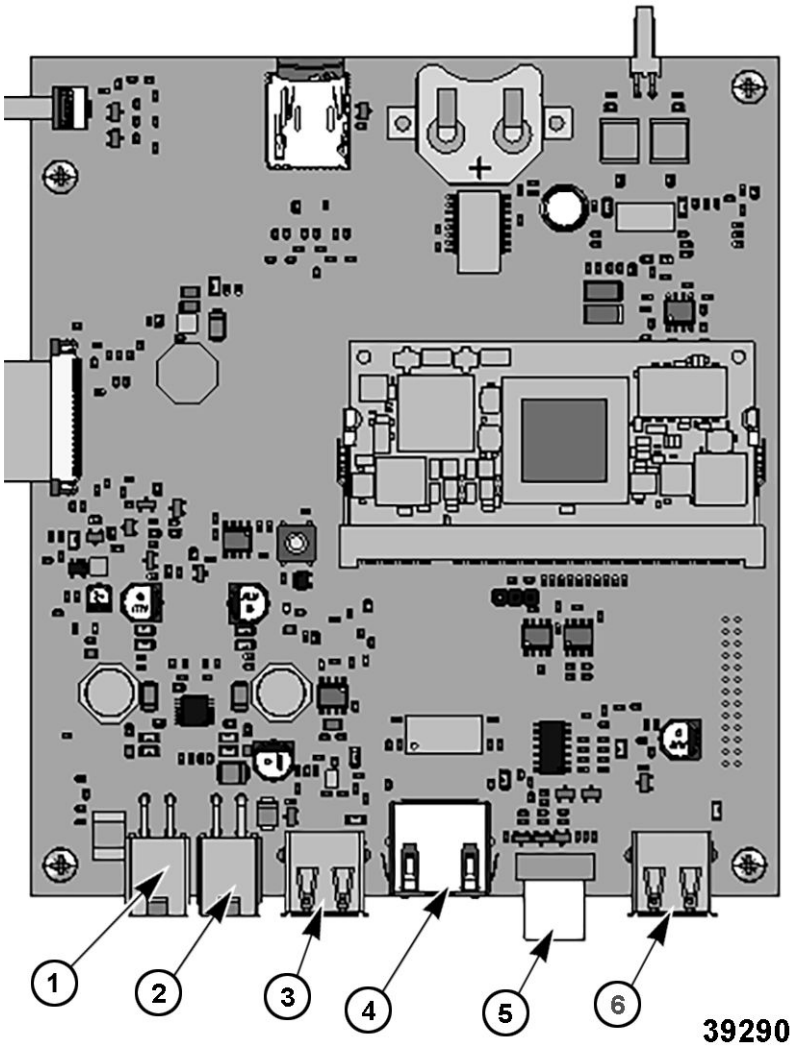
ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
1	J2	1	Red	Ah Red	Check humidity level.	
		2	Orange	Ah Yel		
		3	White	Ah Whi		
		4	Grey	Ah Gre		
		5	Purple	Ah Pur		
		6	Black	Aj Blk		
2	J1	1	Black	Ahu/-	Moisture card power supply.	24 VDC between these two points.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



GAS BOARD

ITEM	CONNECTOR	# OF TERMINALS	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		
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		

ITEM	CONNECTOR	# OF TERMINALS	WIRE COLORS	DESTINATION	DESTINATION ELEMENT FUNCTION	VOLTAGE
4	J7	1	Grey	230VAC	Burner ignition control.	230VAC between 230VAC and 3 Purple AI 3 Xb
		2	Green	AI ½		
		3	Purple	AI 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		

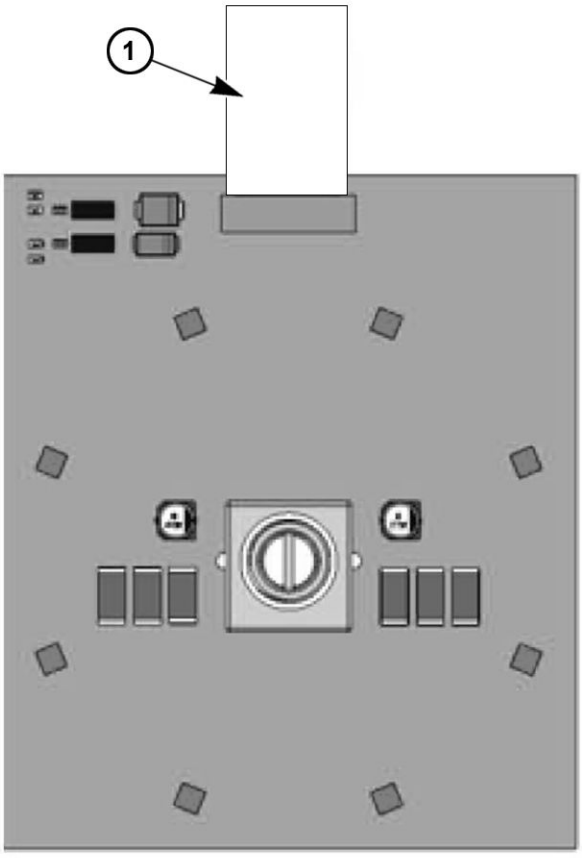


INTERFACE BOARD

ITEM	CONNECTOR	CONNECTOR TYPE	DESTINATION ELEMENT FUNCTION
1	J1	4-pin Molex Connector	Not used.

ITEM	CONNECTOR	CONNECTOR TYPE	DESTINATION ELEMENT FUNCTION
2	J2	4-pin Molex Connector	Connects to main board.
3	J3	USB	Not used.
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 Additional Board
Ac	Encoder Board
Ahu	Additional Humidity Board
Ai	Interface Board
Ar	Automate Board
Avg.Avr1	Gas Solenoid Valves Control Board
Ba	Ambient Probe
Bg	Steam Generator Temperature Board
Bnc	Steam Generator Level Probe
Bnl	Cleaning Box Level Probe
Bsc	Core Probe
Cpn	Cleaning Motor Condensator
Cm	Cavity Motor Condensator
Eag	Steam Generator Gas Igniter, prim:230VAC 0,3A /sec 1x15kV
Ear	Dry Heat Gas Igniter, 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

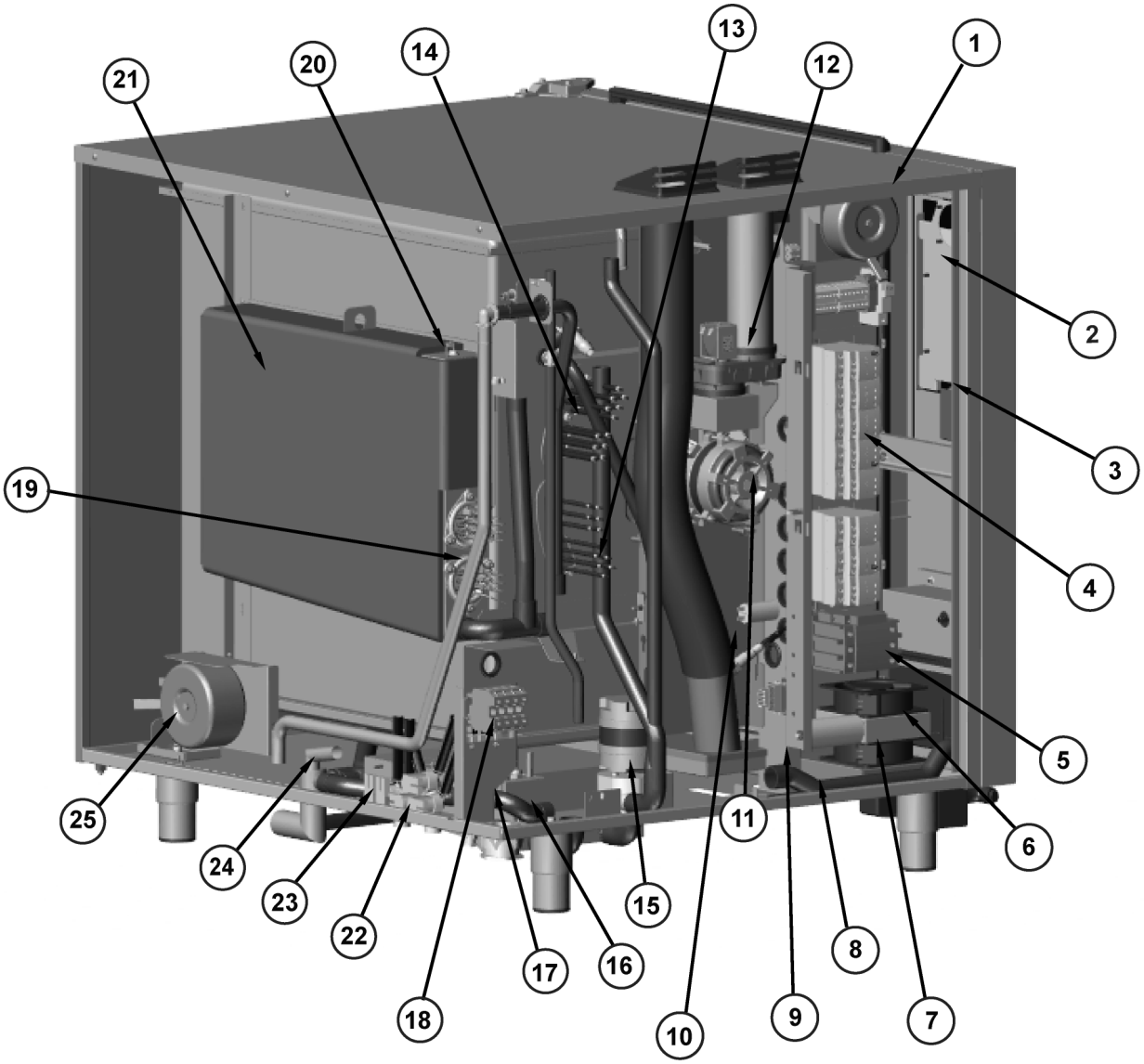
ELECTRICAL CALLOUT	COMPONENT
Mvg	Steam generator Drain Pump Motor
Shu	Humidity Probe
Sp	Closed Door Reed Switch
Ta	Power Supply, 230VAC/24VDC
Tc	Power Supply, 230VAC/24VDC Power Supply, 230VAC/24VDC, Grease Collection Option
Tco	Control Transformer, 415 VA
Tvm	Cavity Fan Motor Transformer , 6 abd 10 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
Ys.Yc	Two Way Solenoid Valve
Ytd.Yg.Yi	Three Way Solenoid Valve
Zp.Zvb.Zbg	Interference Suppression Blocks

ELECTRIC - COMPONENT LAYOUT AND FUNCTION

ELECTRIC OVENS - FRONT

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
1	Ai	Touchscreen Board	Human machine Interface.
2	-	Descaling Box	Contains descaling tablets/liquid.
3	-	Hand Sprayer	Cooling the cavity/Cleaning the oven.
4	-	USB Socket	Allows connection of a USB key for updates, back-ups, etc.

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
5	M1	Cavity Blower Wheel	Ensures even heat distribution.
6	Rc	Cavity Heating Elements	Heats the inside of the Cavity.
7	Bsc	Core Probe	Allows the temperature of food to be taken.

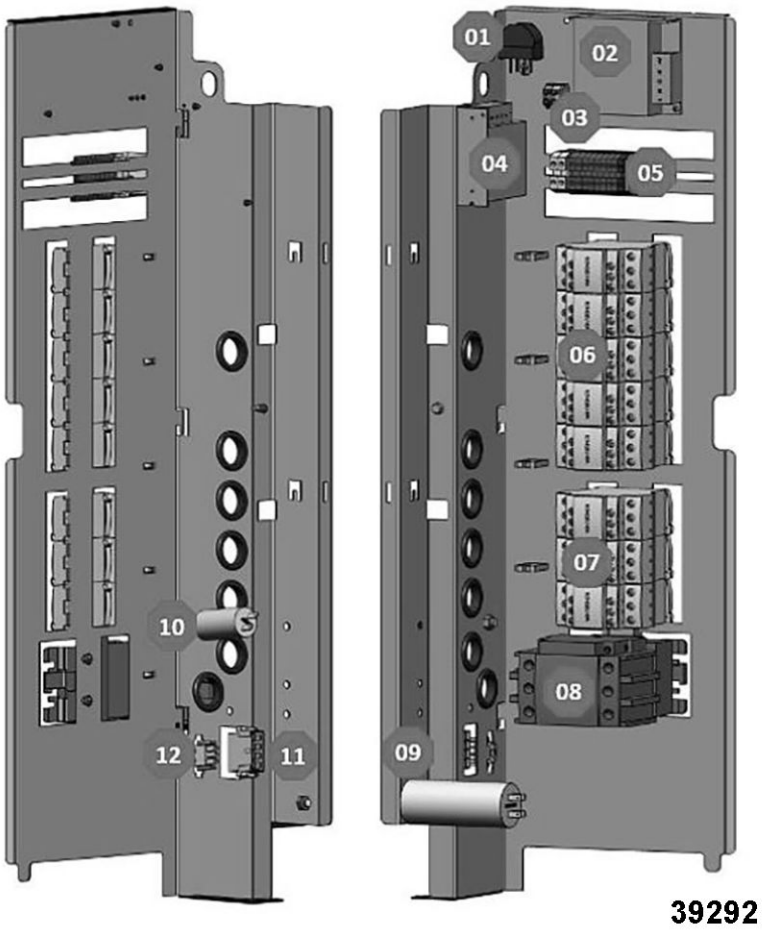


AI5793

ELECTRIC OVENS - SIDE AND BACK

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTION
1	Tco	Control Transformer	(On certain models only) Ensures that customer voltage can be matched to oven operating voltages.
2	Ai	Touchscreen Board	Human machine Interface.
3	Ac	Encoder Card	Human machine Interface.
4	Ar	Main Board and Electrical Circuit Board	Controls oven components.
5	-	Electrical Board	Provides the link between the commands on the Main board and the functions of external components.
6	-	Descaling Box	Contains descaling tablets/liquid.
7	Mvt1-2	Cooling Fan	Ensures forced ventilation of the control panel.
8	-	Spray Hose Reel	For storing the shower hose.
9	Mdg	Pump for Descaling Steam Generator	Descales the steam generator.
10	Shu	Humidify Sensor	Humidity control.
11	M1	Cavity Fan Motor	Ensures even heat distribution.
12	Lo	Vent Solenoid	Controls the movement of the air inlet damper.
13	Rc	Cavity Heating Elements	Heats the inside of the Cavity (several depending on the model).
14	Mvg	Steam Generator Drain Pump	Drains water from the steam generator.
15	Mpn	Washing Pump	Ensures water circulation during washing phases.
16	Mvm	Cavity Drain Pump	Ensures that the liquids contained in the Cavity are drained off.
17	Bnl	Washing / Sump box Water Level Probe	Checks the water level in the wash box.
18	Xp	Power Connection Terminal Block	Ensures customer connection to the oven.
19	Rg	Steam Generator Heating Element	Heats the water in the steam generator.
20	Bnc	Steam Generator Water Level Probe	Checks that the water level in the steam generator is correct.
21	-	Steam Generator	Heats water to turn it into steam.
22	Ytd- Yr - Yi	Triple Solenoid Valve (filter)	Controls the supply of softened water dissolving tablet, cooling and steam generator filling.
23	Ys - Yc	Double Solenoid Valve (unfiltered)	Controls city water supply for spray hose and condenser.
24	-	Wash/Sump Box	Collects the liquid elements contained in the Cavity.
25	Tmv	Cavity Fan Motor Transformer	(Depending models) Adapts the customer voltage to the voltage used by the Cavity fan motor.
26	-	USB Socket	Allows connection of a USB key for updates, back-ups, etc.
27	-	Hand Sprayer	Cooling the cavity/Cleaning the oven.

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTION
28	Baa/Ban	Cavity Temp Probe (Ban) and High Limit Probe (Safety) (rtd)	Controls oven cavity temperature (safety and regulation circuits).
29	M1	Cavity Blower Wheel	Ensures even heat distribution.
30	Bsc	Core Food Probe	Allows the temperature of food to be taken.
31	Ecl	LED Cavity Door Lights	Provide interior lighting for the oven (number depends on model).



ELECTRIC OVENS - ELECTRONICS

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
1	La	EMC Filter	Limits electromagnetic interference.
2	Ta	Switching Power Supply	Supplies 24Vdc to services (lighting, In valve solenoid, grease gun).
3	Xe	Lighting Terminal Block	Connects LED strips for oven lighting.
4	Tc	Switching Power Supply	Supplies 24Vdc to Main board.

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
5	X	Terminal block (Xa,Xb,X+, X-,Xm0,Xm1)	Connects various power supplies.
6	Kr	Dry Heat Control Contactor	Supplies heating elements with dry heat.
7	Kg	Steam Generator Heating Contactor	Supplies steam generator immersion heaters.
8	Kp	Power Contactor	Controls power to oven.
9	Cvm	Cooling Fan	Starts cooling fan.
10	Cpl	Wash Pump Capacitor	Starts wash pump.
11	Xmv	Fan Motor Connector	Connects fan motor to board.
12	Xpl	Wash Pump Connector	Connects wash pump to board.

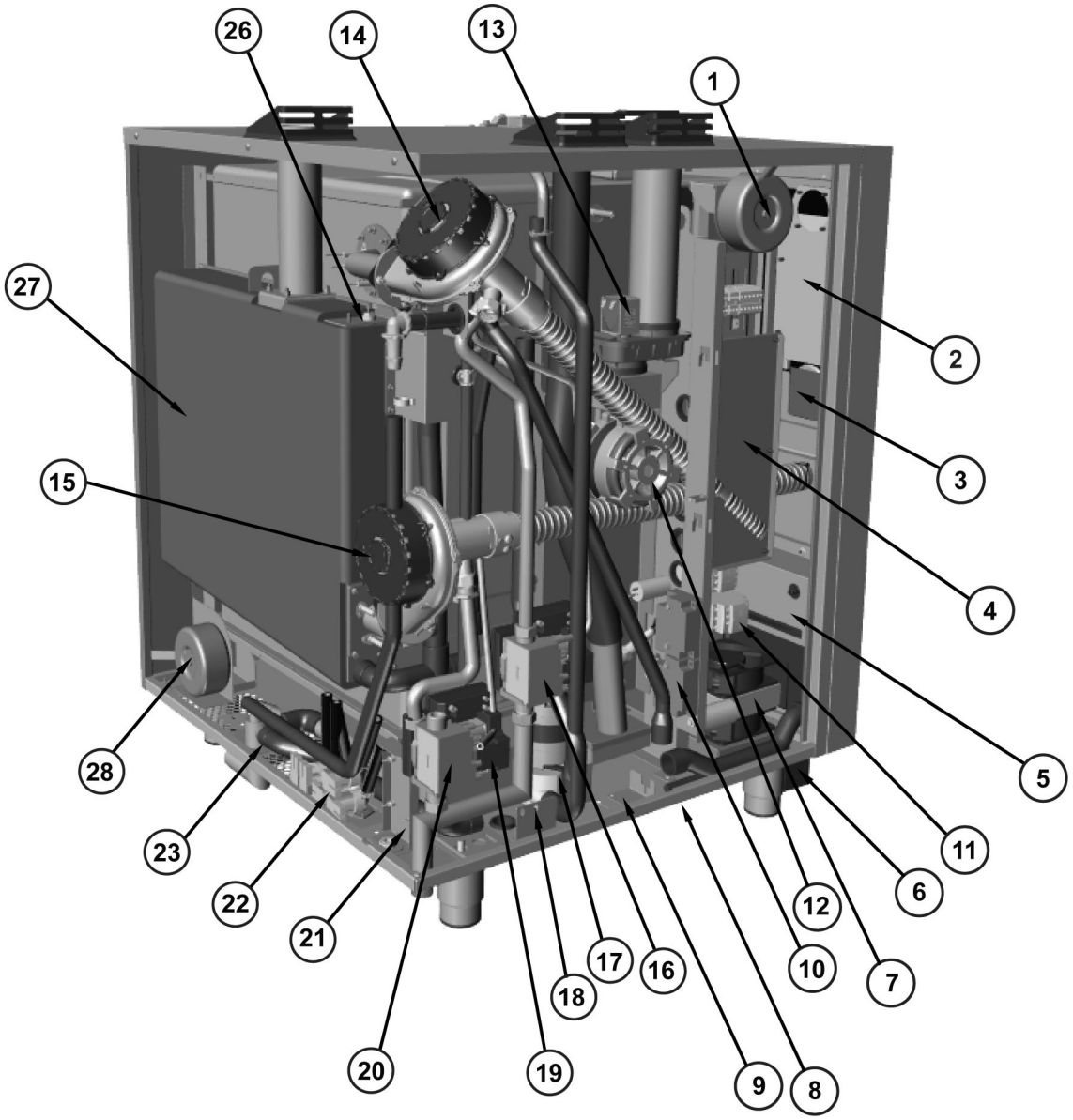
GAS - COMPONENT LAYOUT AND FUNCTION

AI5791

GAS OVENS - FRONT

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

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTION
4	-	USB Socket	Allows connection of a USB key for updates, back-ups, etc.
5	-	Cavity Heat Exchanger	Heats the inside of the oven.
6	M1	Cavity Blower Wheel	Ensures even heat distribution.
7	Bsc	Core Probe	Allows the temperature of food to be taken.

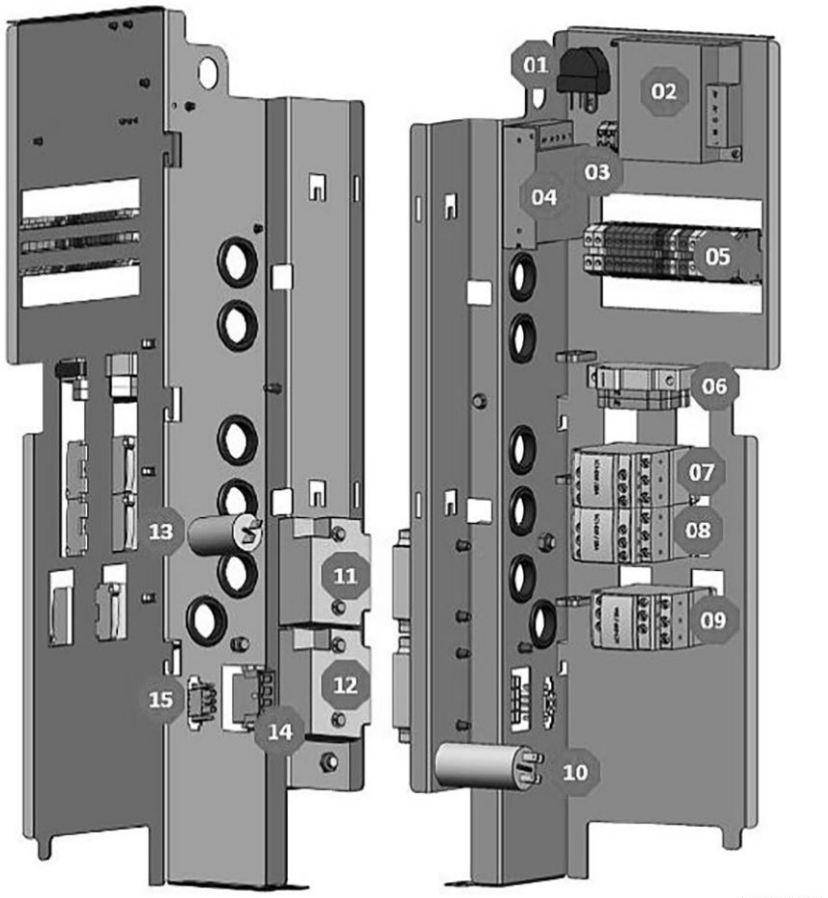


GAS OVENS - SIDE AND BACK

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
1	Toc	Control Transformer	(On certain models only) Ensures that customer voltage can be matched to oven operating voltages.
2	Ai	Touchscreen Board	Human machine Interface.

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
3	Ac	Encoder Card	Human machine Interface.
4	Ar	Main Board and Humidity Board	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	Mt1 and Mt2	Cooling Fan	Ensures forced ventilation for control panel.
8	-	Spray Hose Reel	Contains spray hose supply hose.
9	Mdg	Pump for Descaling Steam Generator	Descales steam generator.
10	Shu	Humidity Sensor	Humidity control.
11	-	Electrical Board	Provides link between commands on Main board and the functions of external components.
12	M1	Cavity Fan Motor	Ensures even cooking distribution.
13	Lo	Vent Solenoid	Controls movement of the air inlet damper.
14	Mbr	Cavity Burner Blower Motor	Supplies oxygen to the flame.
15	Mbg	Steam Generator Burner Blower Motor	Supplies oxygen to the flame.
16	Apr-1	Cavity Gas Valve	Controls gas supply to dry heat burner.
17	Mpn	Washing Pump	Keeps oven clean.
18	Mvm	Drain/Sump Pump	Ensures liquids contained in the Cavity are drained off
19	Bnl	Washing /Sump Box Water Level Probe	Checks water level in wash box.
20	Avg	Steam Generator Gas Valve	Controls gas supply to the steam generator burner.
21	Xp	Power Terminal Block	Enables customer's power supply to be connected.
22	Ytd-Yr-Yi	Triple Solenoid Valve	Controls supply of softened water dissolving tablet, cooling and steam generator filling.
23	Ys-Yc	Double Solenoid Valve	Controls city water supply for spray hose and condenser.
24	-	Wash Box	Collects the liquid elements contained in the Cavity.
25	Bga/Bgn	Temperature Probe Steam Generator	Control the temperature in the steam generator (safety and regulation circuit).
26	Bng	Steam Generator Level Probe	Checks water level in steam generator.
27	-	Steam Generator	Turns water into steam.
28	Tmv	Cavity Fan Motor Transformer	(On certain models only) Adapts customer voltage to the voltage used by Cavity fan motor.
29	-	USB Socket	Allows connection of a USB key for updates, back-ups, etc.
30	-	Spray Hose	For sprayer to clean inside of oven cavity.
31	Baa/Ban	Cavity Probe	Controls temperature in oven cavity (safety and regulation circuit).
32	M1	Cavity Fan	Allows even heat distribution.
33	-	Cavity Heat Exchanger	Heats inside of oven.

ITEM	ELECTRICAL CALLOUT	COMPONENT	FUNCTIONS
34	Bsc	3-Point Core Probe	Allows the temperature of food to be taken.
35	Ecl	LED Banners	(Number varies according to oven model) Illuminates the oven cavity.



GAS - ELECTRONICS

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

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

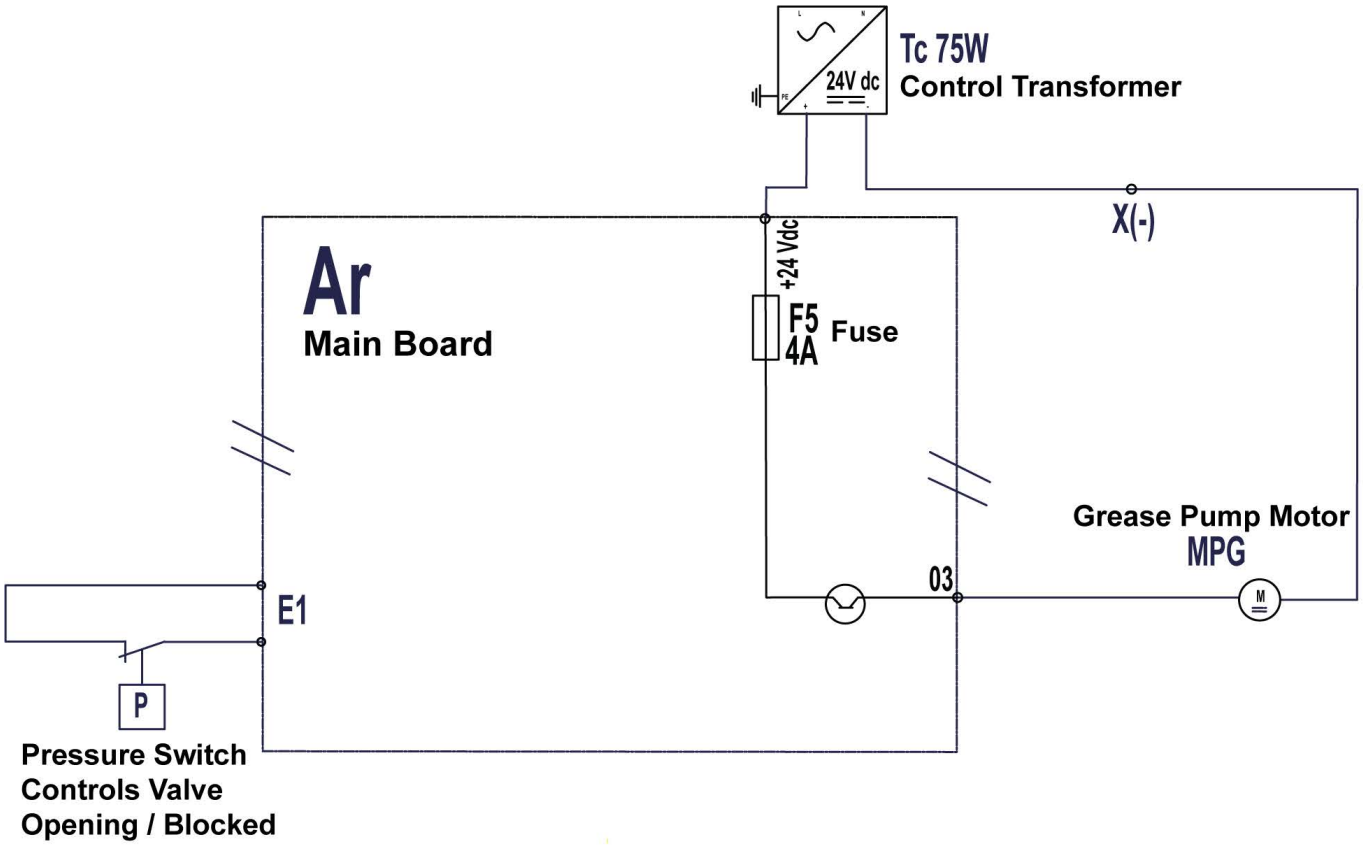
20. Turbine rotation.
    - Motor relays E21-S22 and E21-S23 switch every 4 minutes.
21. Stop cooking.
    - One minute before the end of the elapsed time, a beep is emitted and a dialogue box appears offering several choices (continue, maintain temperature and stop).

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

OPTIONS - DIAGRAMS



CHEF Combi Grease Collection Diagram
DERIVED FROM Option Collection graisse_Grease collection option Rev A **AI6003**

Fig. 187

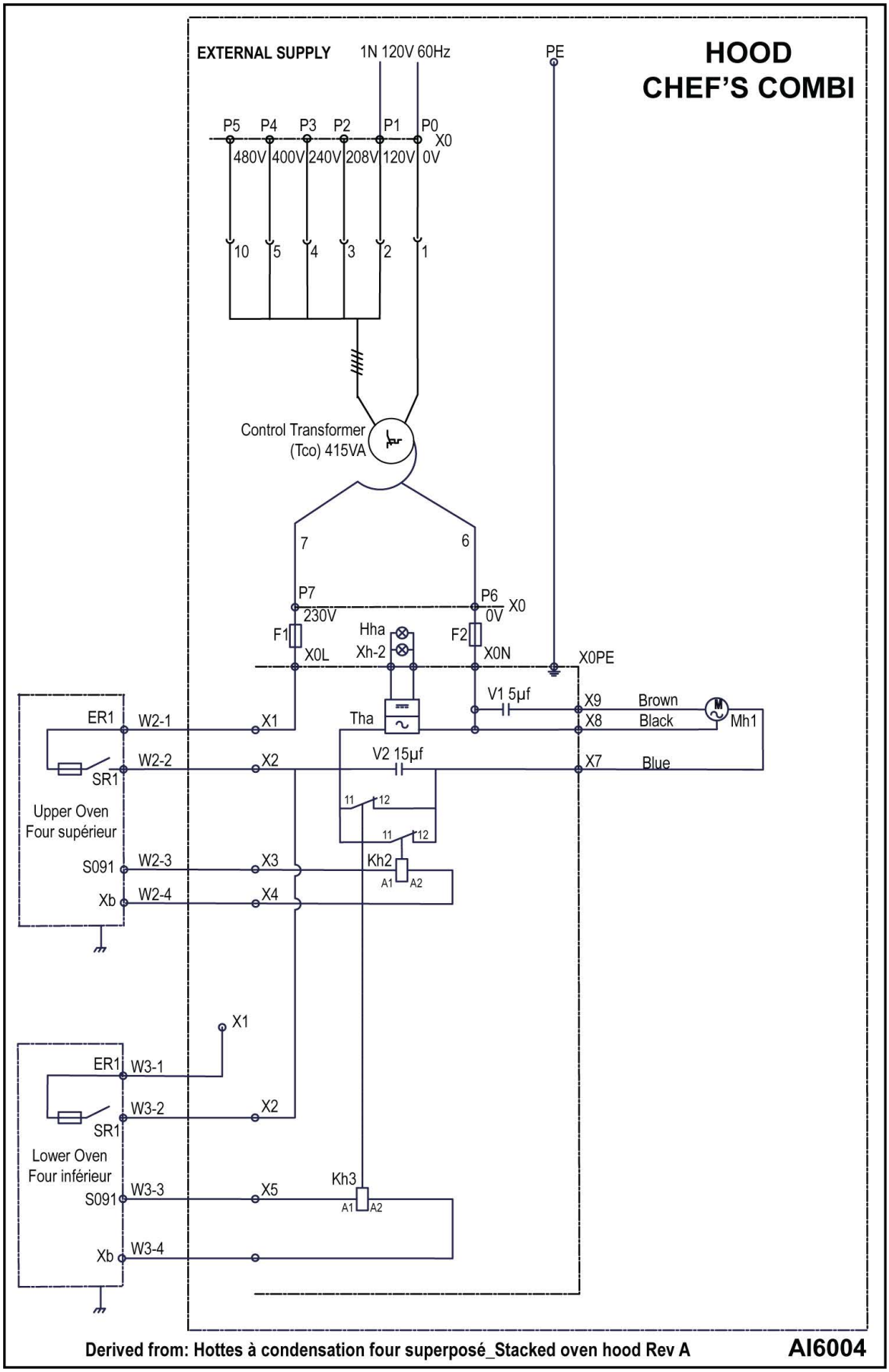

HOOD
CHEF'S COMBI
EXTERNAL SUPPLY
1N 120V 60Hz
PE
P5 P4 P3 P2 P1 P0 X0
480V 400V 240V 208V 120V 0V
10 5 4 3 2 1
Control Transformer
(Tco) 415VA
7
6
P7 230V
P6 0V X0
F1
F2
Hha
Xh-2
X0L
X0N
X0PE
V1 5µf
X9 Brown
X8 Black
Mh1
Tha
V2 15µf
X7 Blue
ER1
W2-1
X1
W2-2
X2
SR1
Upper Oven
Four supérieur
S091
W2-3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

Fig. 188

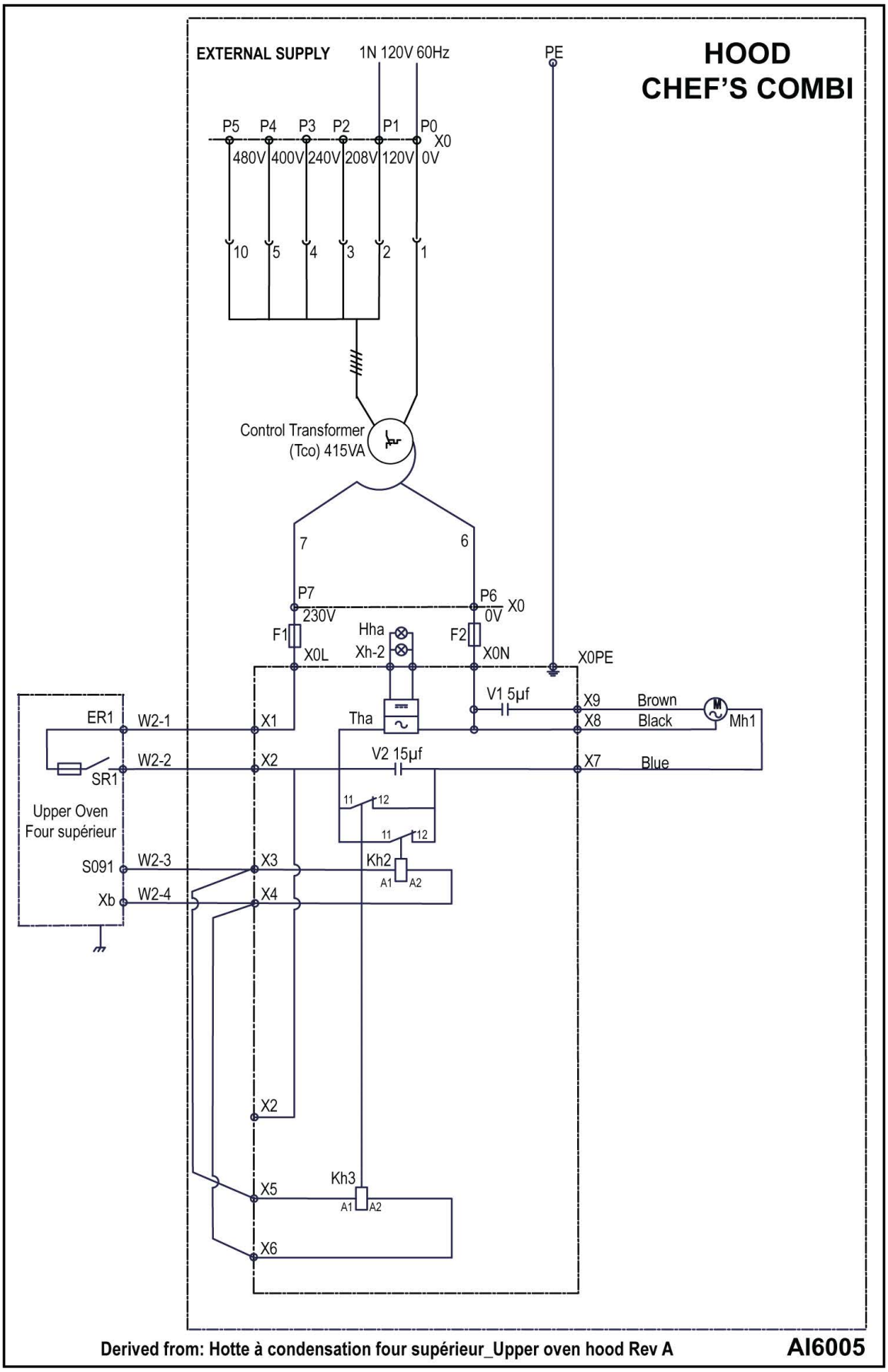

EXTERNAL SUPPLY
1N 120V 60Hz
PE
HOOD
CHEF'S COMBI
P5 P4 P3 P2 P1 P0
X0
480V 400V 240V 208V 120V 0V
10 5 4 3 2 1
Control Transformer
(Tco) 415VA
7
6
P7
230V
P6
0V
X0
F1
Hha
Xh-2
F2
X0L
X0N
X0PE
V1 5µf
X9
Brown
X8
Black
Mh1
ER1
W2-1
X1
Tha
W2-2
X2
V2 15µf
X7
Blue
SR1
Upper Oven
Four supérieur
11
12
11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

Fig. 189

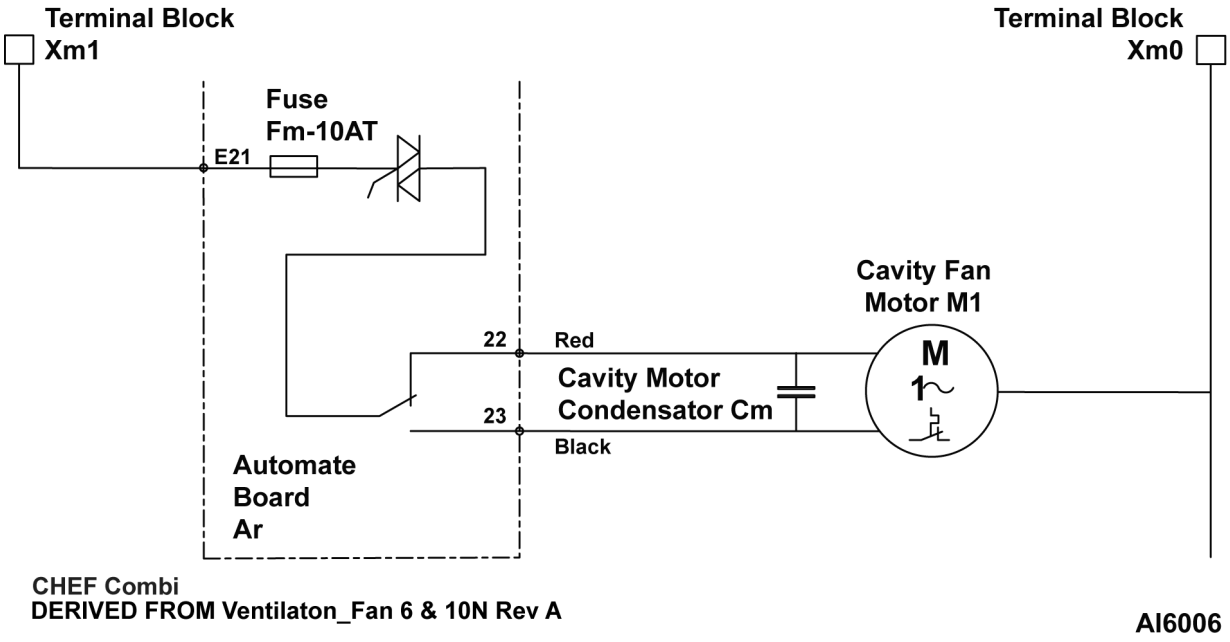
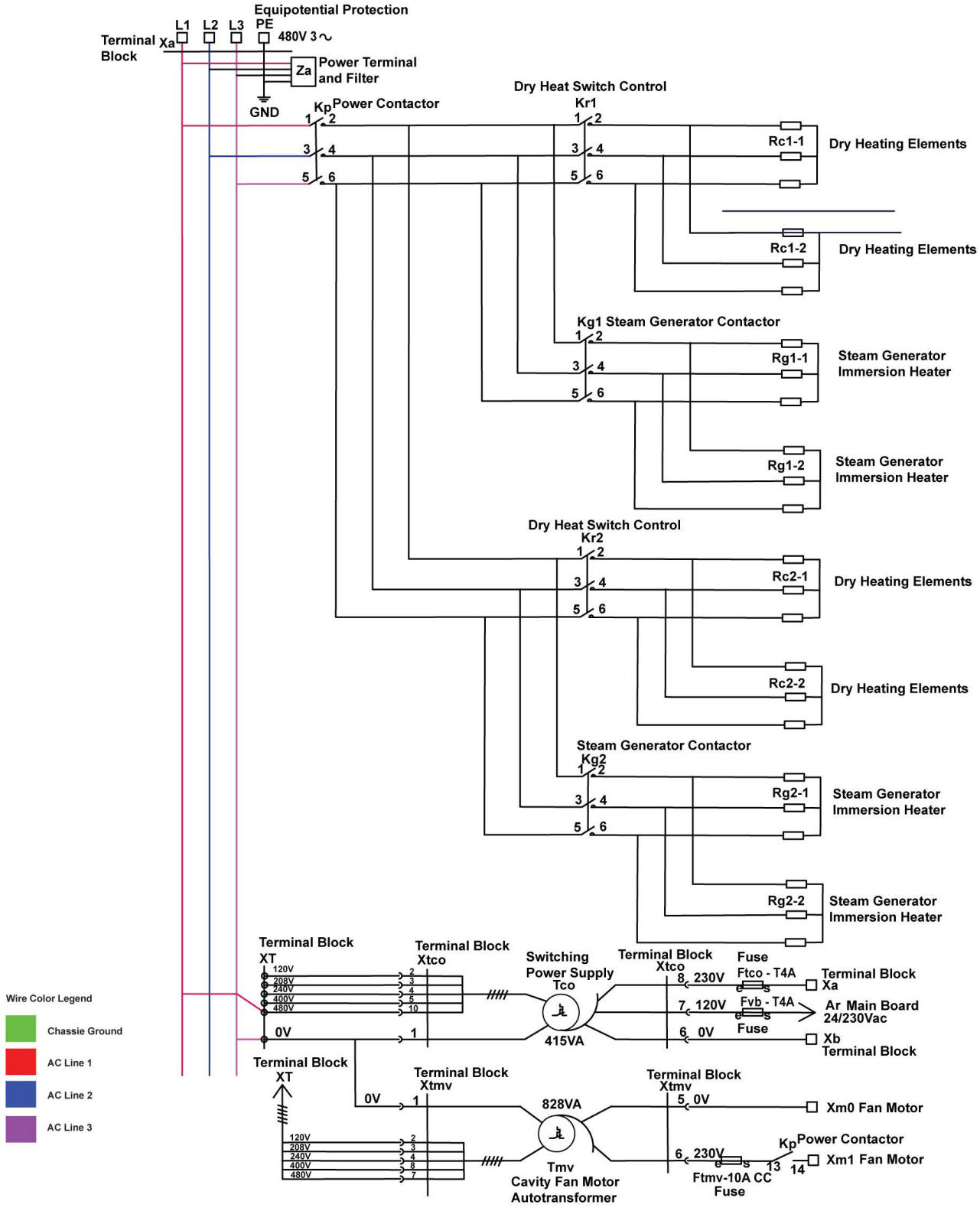


Fig. 190

ELECTRIC - DIAGRAMS

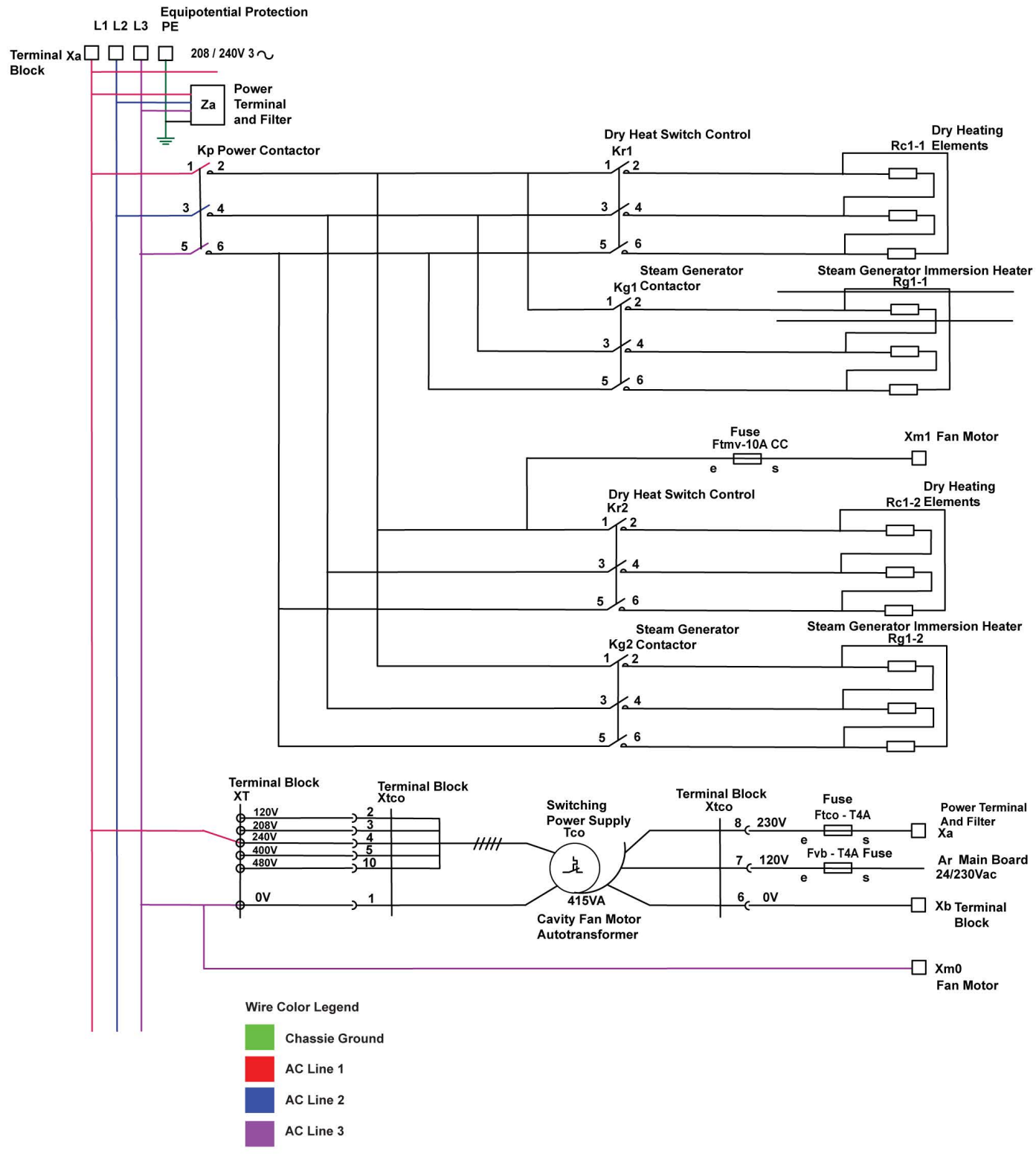
Chef Combi Electric Schematic



CHEF Combi 102E - 480V
DERIVED FROM Puissance_Power_102E-480V Rev A

AI5795

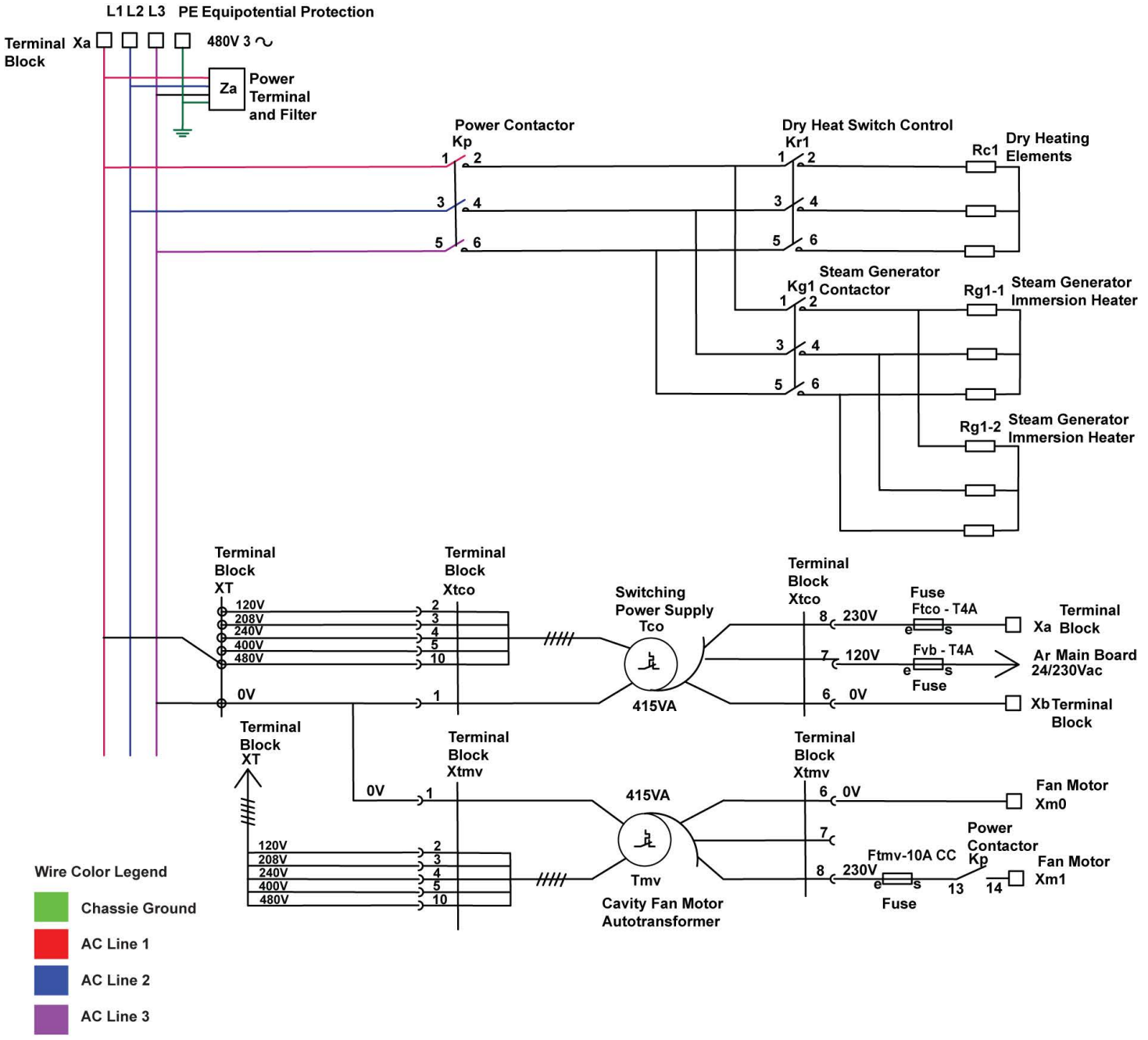
Fig. 191



CHEF Combi 62E & 101E
DERIVED FROM Puissance_Power_62E- & 101E 208V & 240V Rev A

AI5796

Fig. 192



CHEF Combi 480V
DERIVED FROM Puissance_Power_61E- 480V Rev A

AI5798

Fig. 193

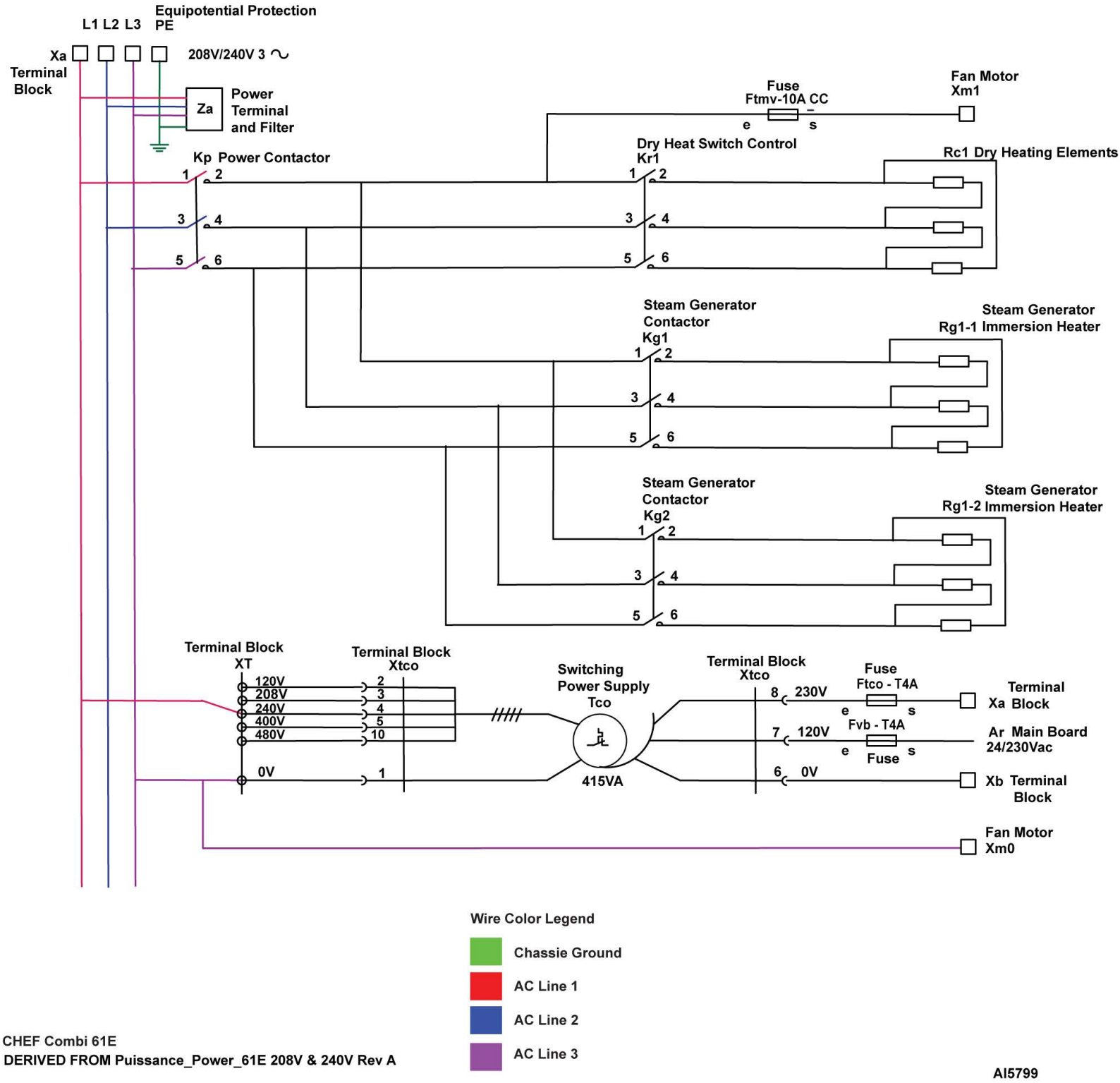
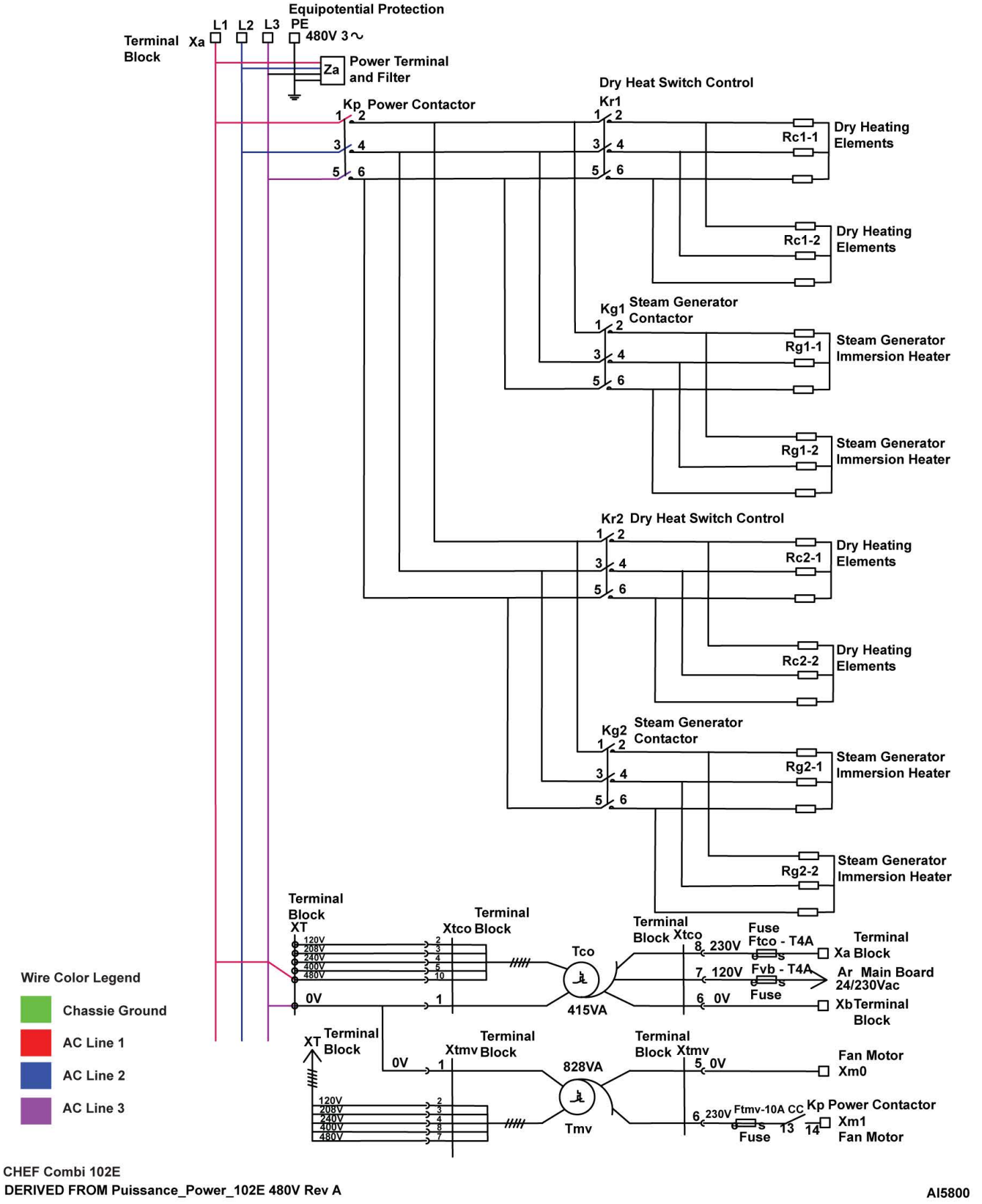

Equipotential Protection
PE
L1 L2 L3
Xa
Terminal
Block
208V/240V 3 ~
Za
Power
Terminal
and Filter
Kp Power Contactor
Fuse
Ftmv-10A CC
Fan Motor
Xm1
Dry Heat Switch Control
Kr1
Rc1 Dry Heating Elements
Steam Generator
Contactor
Kg1
Steam Generator
Rg1-1 Immersion Heater
Steam Generator
Contactor
Kg2
Steam Generator
Rg1-2 Immersion Heater
Terminal Block
XT
Terminal Block
Xtco
120V
208V
240V
400V
480V
0V
Switching
Power Supply
Tco
415VA
Terminal Block
Xtco
230V
120V
0V
Fuse
Ftco - T4A
Fvb - T4A
Fuse
Terminal
Xa Block
Ar Main Board
24/230Vac
Xb Terminal
Block
Fan Motor
Xm0
Wire Color Legend
Chassie Ground
AC Line 1
AC Line 2
AC Line 3
CHEF Combi 61E
DERIVED FROM Puissance_Power_61E 208V & 240V Rev A
AI5799

Fig. 194



CHEF Combi 102E
DERIVED FROM Puissance_Power_102E 480V Rev A

AI5800

Fig. 195

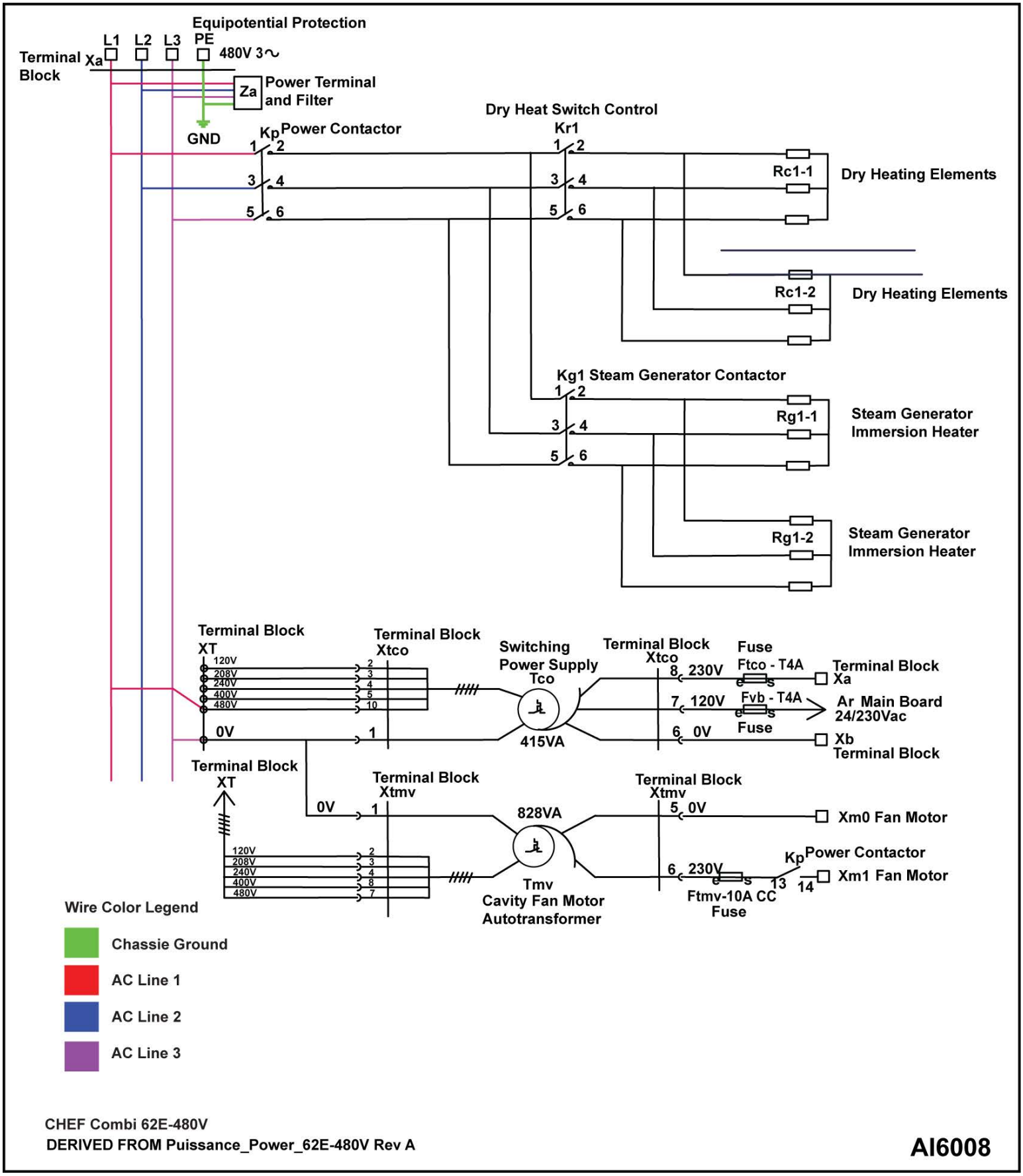

Equipotential Protection
L1 L2 L3 PE
Terminal Block Xa
480V 3~
Za
Power Terminal and Filter
GND
Kp Power Contactor
Dry Heat Switch Control
Kr1
Rc1-1
Dry Heating Elements
Rc1-2
Dry Heating Elements
Kg1 Steam Generator Contactor
Rg1-1
Steam Generator Immersion Heater
Rg1-2
Steam Generator Immersion Heater
Terminal Block XT
120V
208V
240V
400V
480V
0V
Terminal Block Xtco
Switching Power Supply Tco
415VA
Terminal Block Xtco
230V
120V
0V
Fuse
Ftco - T4A
Fvb - T4A
Fuse
Terminal Block Xa
Ar Main Board 24/230Vac
Xb Terminal Block
Terminal Block XT
Terminal Block Xtmv
0V
828VA
Tmv Cavity Fan Motor Autotransformer
Terminal Block Xtmv
0V
Xm0 Fan Motor
Kp Power Contactor
230V
Ftmv-10A CC Fuse
Xm1 Fan Motor
Wire Color Legend
Chassie Ground
AC Line 1
AC Line 2
AC Line 3
CHEF Combi 62E-480V
DERIVED FROM Puissance_Power_62E-480V Rev A
AI6008

Fig. 196

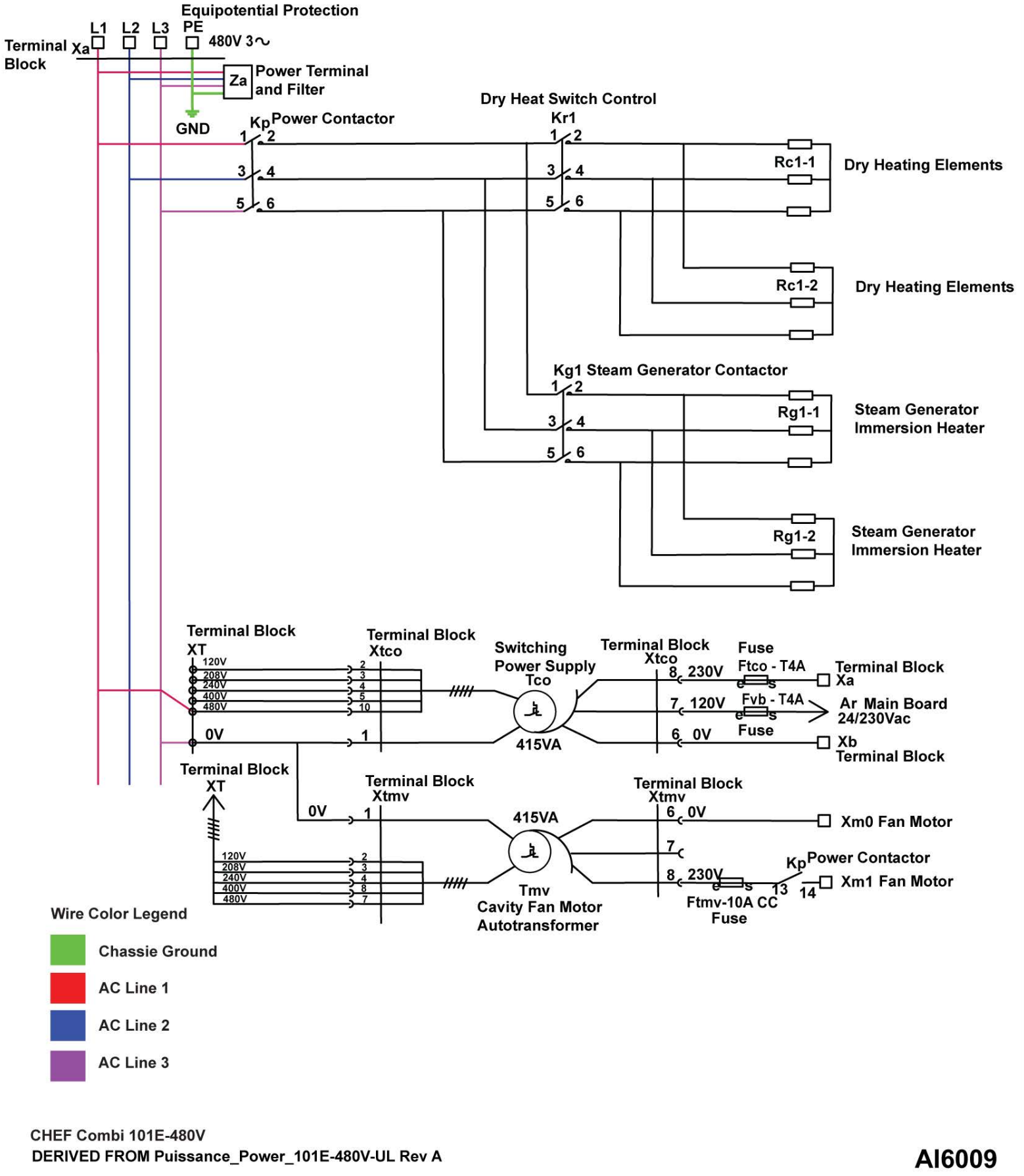

Equipotential Protection
L1
L2
L3
PE
480V 3~
Terminal Block Xa
Za
Power Terminal and Filter
GND
Kp Power Contactor
Dry Heat Switch Control
Kr1
Rc1-1
Dry Heating Elements
Rc1-2
Dry Heating Elements
Kg1 Steam Generator Contactor
Rg1-1
Steam Generator Immersion Heater
Rg1-2
Steam Generator Immersion Heater
Terminal Block XT
120V
208V
240V
400V
480V
0V
Terminal Block Xtco
Switching Power Supply Tco
415VA
Terminal Block Xtco
230V
120V
0V
Fuse Ftco - T4A
Fvb - T4A
Fuse
Terminal Block Xa
Ar Main Board 24/230Vac
Xb Terminal Block
Terminal Block XT
Terminal Block Xtmv
0V
415VA
Tmv Cavity Fan Motor Autotransformer
Terminal Block Xtmv
0V
Xm0 Fan Motor
Kp Power Contactor
230V
Xm1 Fan Motor
Ftmv-10A CC Fuse
Wire Color Legend
Chassie Ground
AC Line 1
AC Line 2
AC Line 3
CHEF Combi 101E-480V
DERIVED FROM Puissance_Power_101E-480V-UL Rev A
AI6009

Fig. 197

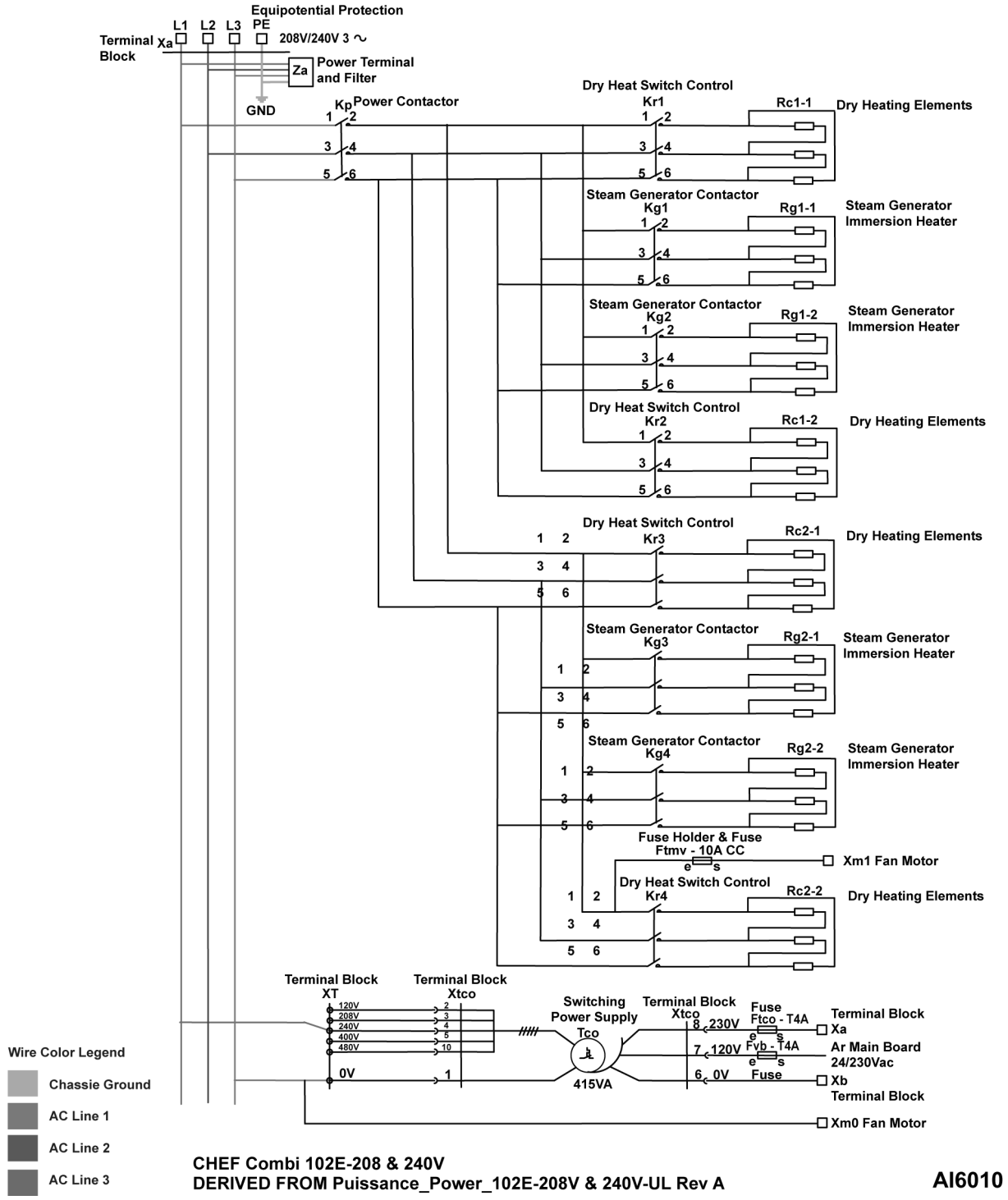


Fig. 198

GAS - DIAGRAMS

Chef Combi Gas Schematic

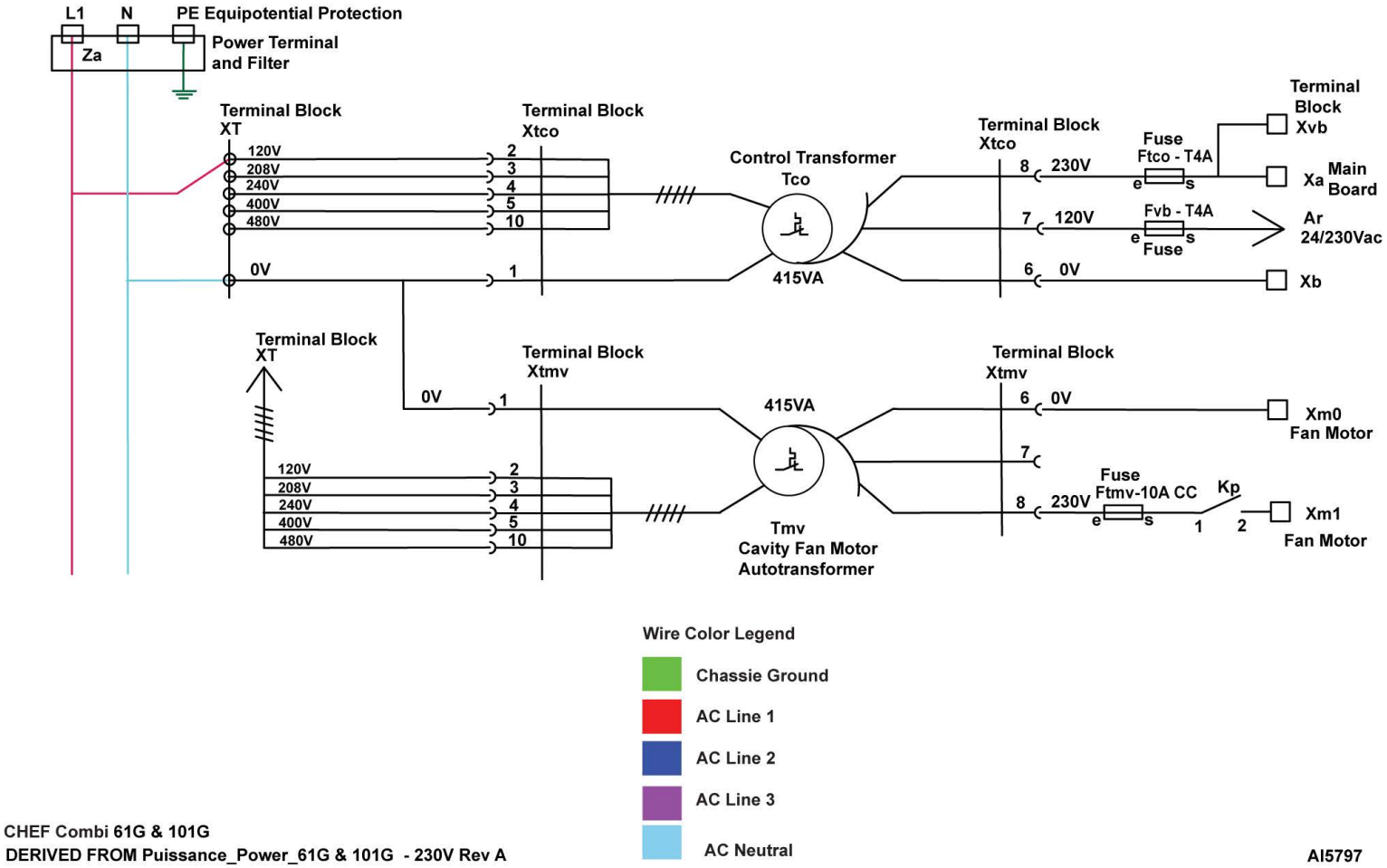

L1
N
PE Equipotential Protection
Za
Power Terminal and Filter
Terminal Block XT
120V
208V
240V
400V
480V
0V
Terminal Block Xtco
2
3
4
5
10
1
Control Transformer Tco
415VA
Terminal Block Xtco
8
230V
7
120V
6
0V
Fuse Ftco - T4A
Fvb - T4A
Fuse
Terminal Block Xvb
Xa Main Board
Ar 24/230Vac
Xb
Terminal Block XT
Terminal Block Xtmv
0V
1
120V
208V
240V
400V
480V
2
3
4
5
10
415VA
Tmv Cavity Fan Motor Autotransformer
Terminal Block Xtmv
6
0V
7
8
230V
Fuse Ftmv-10A CC
Kp
1
2
Xm0 Fan Motor
Xm1 Fan Motor
Wire Color Legend
Chassie Ground
AC Line 1
AC Line 2
AC Line 3
AC Neutral
CHEF Combi 61G & 101G
DERIVED FROM Puissance_Power_61G & 101G - 230V Rev A
AI5797

Fig. 199

9. TROUBLESHOOTING

TROUBLESHOOTING ACCESS

Access Error History

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

Fig. 200

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

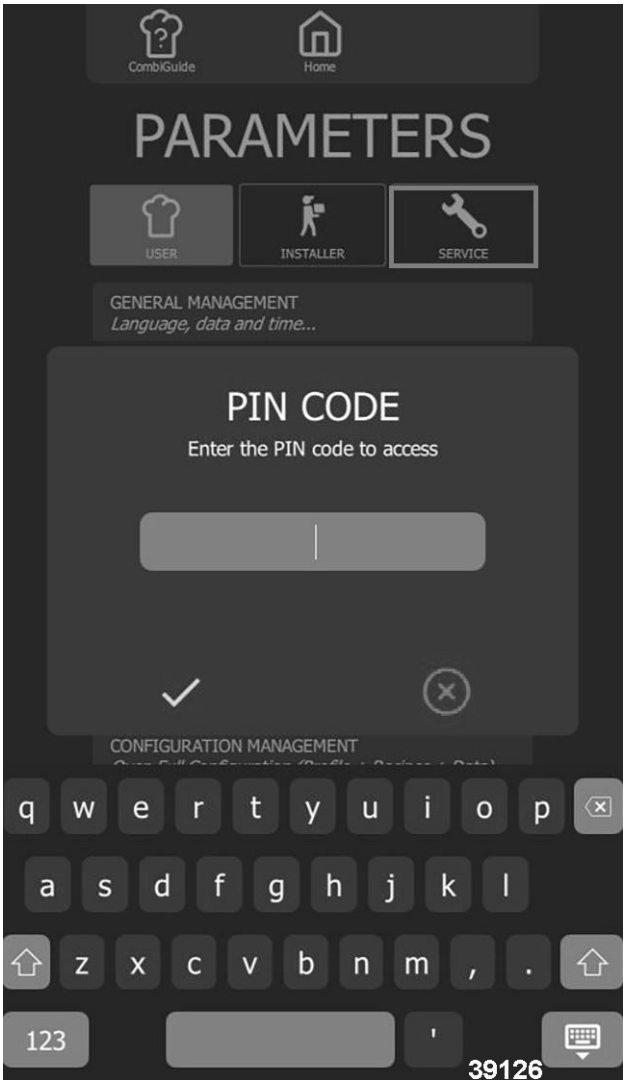


Fig. 201

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

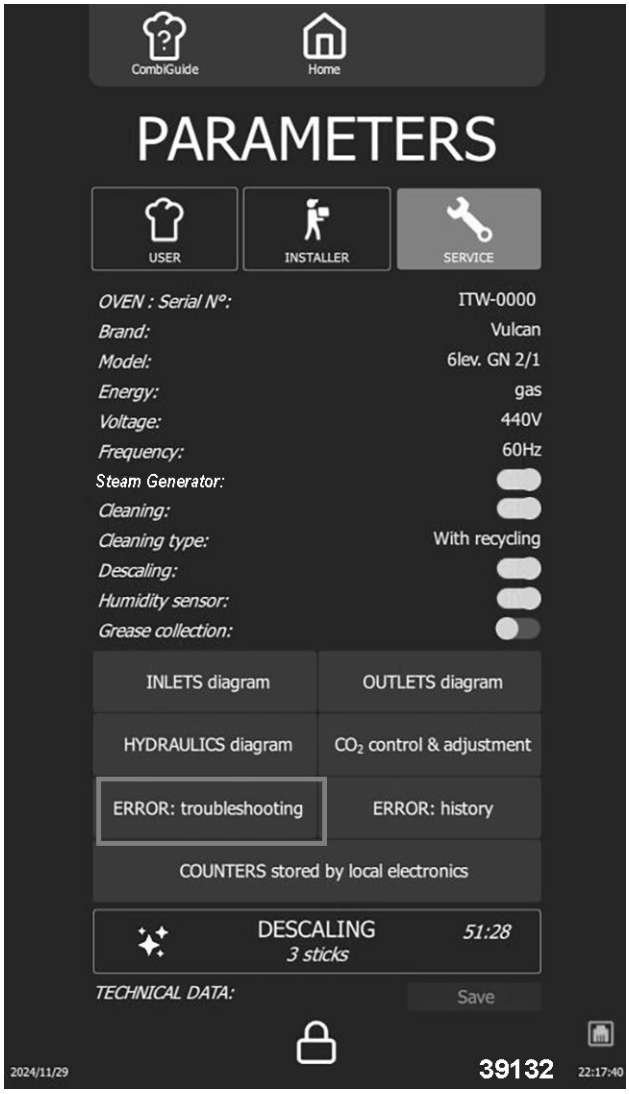


Fig. 202

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.

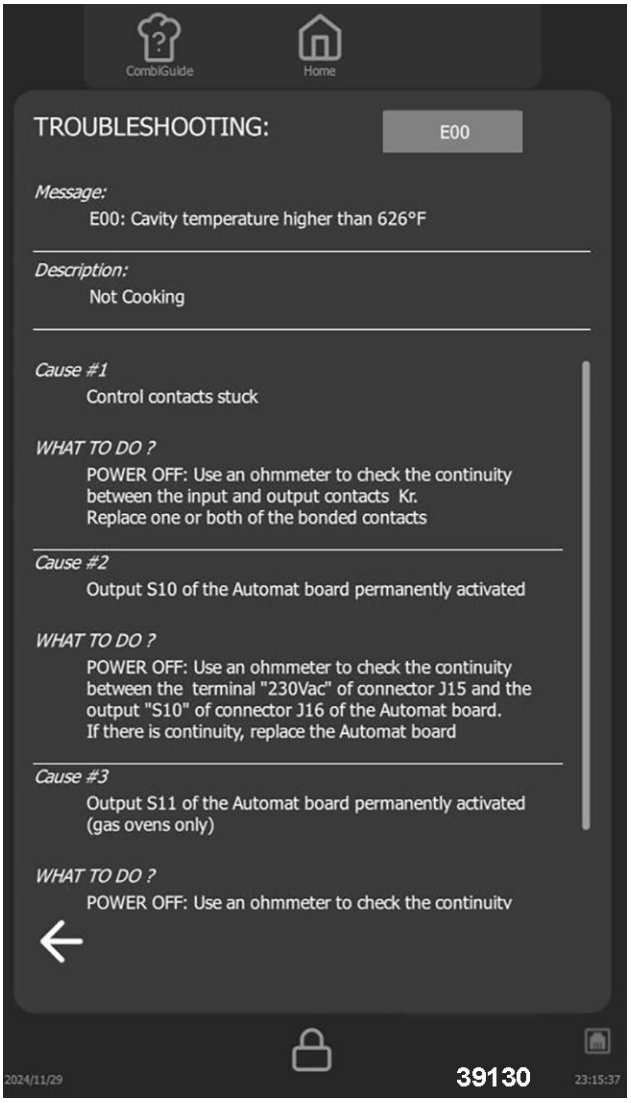


Fig. 203

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.

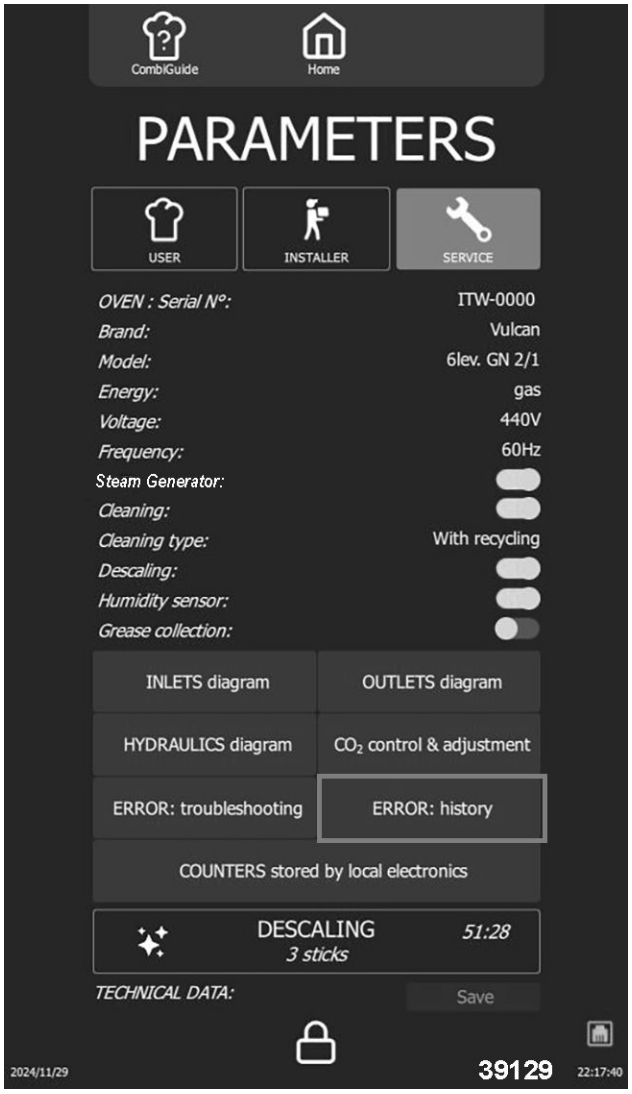


Fig. 204

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.

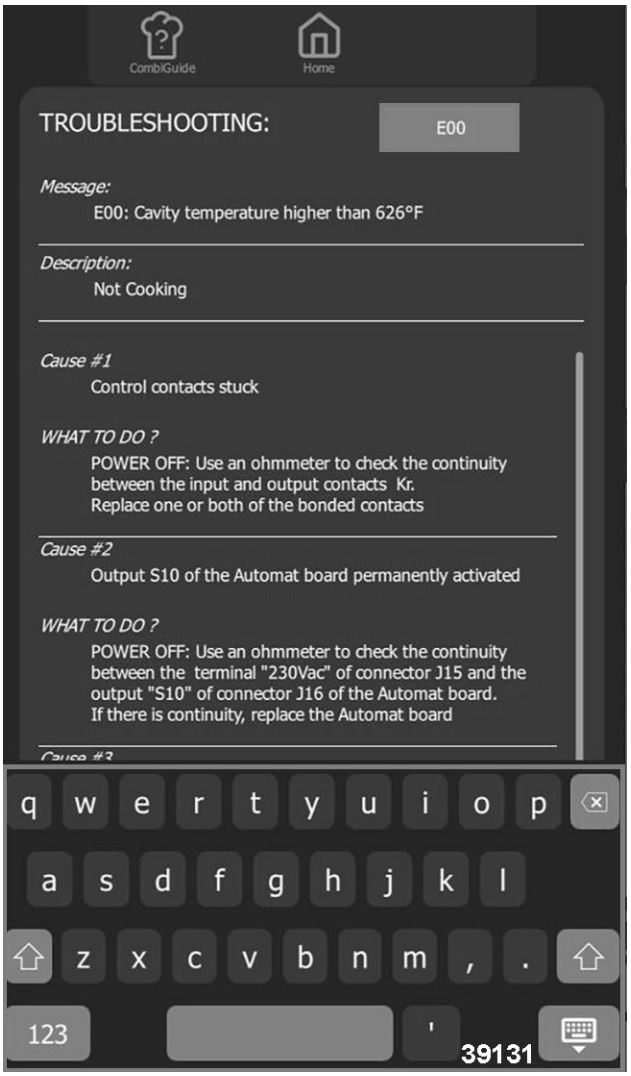


Fig. 205

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. 206

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.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E00	Cavity overheat greater than 626°F.	Control contacts stuck.	Power oven off. Use ohmmeter to check the continuity between the input and output of contactors. Replace one or both of the bonded contactors.
		Output S10 from PLC board permanently activated.	Power oven off. Use ohmmeter to check continuity between terminal "230VAC" of connector J15 and output "S10" of connector J16 on PLC board. If there is continuity, replace PLC board.
		Output S11 from PLC board permanently activated (gas ovens only).	Power oven off. Use an ohmmeter to check the continuity between the terminal "230VAC" of connector J15 and the output "S10" of connector J16 of PLC board. If there is continuity, replace PLC board.
E01	Ambient sensor cavity fault.	Check fault on the "Technical screen."	Open "Parameter screen" page and verify temperature being indicated by the cavity temperature sensor (Ban). If the value is "---", the sensor circuit is faulty (either short-circuited or open).
		Wire broken in probe or input connection faulty.	Disconnect the probe Pt100 cavity temperature probe (Ban) from the connecter J2 of PLC card and take a measurement between the 2 white wires using an ohmmeter; If circuit is broken, repair connection. If not, replace probe.
		Short circuit in the probe or probe input connection faulty.	If there is a short-circuit repair connection. Otherwise change probe.
		PLC board electrical fault.	If probe and connections are functioning, replace PLC board.
E02	Ambient sensor cavity fault.	"Parameter screen" fault.	Open "Parameter screen" page and verify temperature being indicated by the ambient temperature sensor (Baa). If the value is "---", the sensor circuit is faulty (either short-circuited or open).
		Wire broken in probe or input connection faulty.	Disconnect the probe Pt100 cavity (Baa) from the connecter J2 on PLC card and take a measurement between the 2 red wires using an ohmmeter; If circuit is broken, repair connection. If not, replace probe.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Short circuit in probe or probe input connection faulty.	If there is a short-circuit repair connection. Otherwise change probe.
		PLC board electrical fault.	If probe and connections are functioning, replace PLC board.
E10	Steam generator scale.	Scale.	Descale steam generator. Refer to: DESCALE
E11	High level of steam generator scale.	Scale.	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).
		Open "Parameter screen" page and check temperature being indicated by the food probe "Bsc." If the value is "---" at all points, the common point of the probe (Bsc com) is faulty (either short-circuited or open).	Disconnect J1 on the PLC 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 PLC card is defective.	Replace PLC board.
E13	Steam generator temperature sensor fault.	Amount of scale in the steam generator is too high and steam cannot be produced. Only use oven in convection mode. Select "Resume" below if you wish to automatically switch to convection mode. During the next cleaning process, force descaling while using maximum dose of descaling product. Contact your local technical representative if issue persists.	Open "Parameter screen" page. Check temperature being indicated by the food probe "Bsc." If one of the values is "---", this point of the probe (Bsc1 => Bsc3) is faulty (either short-circuited or open).
		Wire broken in probe or input connection "Bgn."	Disconnect probe PT100 "Bgn" from J2 connector on PLC board. Measure between the two white wires using ohmmeter. If circuit is broken, repair connection. If not, replace probe.
		Short circuit in probe or probe input connection "Bgn."	If there is a short-circuit repair connection. Otherwise change probe.
		PLC board electrical fault.	If the probe and connections are functioning, replace PLC board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
E14	Steam generator temperature sensor fault.	Check fault on "Parameter screen."	
		Wire broken in probe or input connection "Bga."	Disconnect probe PT100 "Bga" from J2 connector on PLC board. Measure between the two white wires using ohmmeter. If circuit is broken, repair connection. If not, replace probe.
		Short circuit in probe or probe input connection "Bga."	If there is a short-circuit repair connection. Otherwise change probe.
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 PLC board has blown.	Select " Yrc" to activate the output "S20" on PLC board and press for 1 min. If the solenoid fill valve on the boiler, "Yrc", doesn't open, inspect Fuse "F1." If fuse is blown, check condenser and solenoid valves (Yc) and (Yr) operation. Perform needed repairs and replace fuse with one of same type.
		Steam generator is not getting water supply: Output "S20" on PLC board is faulty.	Select "Yrc" on "Parameter screen" and measure voltage between output "S20" of the PLC and terminal "Xb." If voltage is less than 230V, replace PLC board. **⚠ 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.	Select Yrc" on "Parameter screen." If steam generator fill solenoid valve "Yrc" does not open, replace solenoid valve.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Water flow rate too low.	Select "Yrc" on "Parameter screen" and let water flow into receptacle while keeping solenoid valve open (1 min). Measure volume of water collected. This should be approximately 1.32 gallons. If less than 1.32 gallons, check the state of the steam generator fill 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 PLC board.
E16	Steam generator drainage pump fault.	24/230VAC supply voltage input fault.	With a voltmeter, check supply voltage between input 24/230VAC on PLC 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 PLC board switch S06.	Connect a voltmeter between terminal S06 on PLC board and terminal Xb. Activate relay output S06 from the technical control screen. If voltage reads zero when relay is operated, replace PLC board.
		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.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		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 PLC 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 Yr and Yrc). Repair by replacing fuse with same type.
		Fault with PLC board output S18.	Connect a voltmeter between terminal S18 on PLC board and terminal Xb. Activate relay output S18 from the technical control screen. If the voltage is zero when the output is activated, replace PLC board. **⚠ WARNING** **The output is controlled by a triac: a voltage can be read at the output, even when the triac is not open.**

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Condenser solenoid valve (Yc) is not powered.	Connect a voltmeter to terminals on condenser solenoid valve (Yc). 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 PLC board.
E21	Self cleaning tank drainage pump fault.	21/230 VAC supply voltage input fault.	Check supply voltage between input 24/230VAC from PLC card and terminal "Xb." This voltage should be 230V (120V on ovens version "UL"). If not, find 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 cavity drain pump (Mvm)). Repair by replacing fuse with the same model.
		Fault with PLC card switch S05.	Connect voltmeter between terminal S05 on PLC card and terminal Xb. Activate relay output S05 on technical control screen. If the voltage reads zero when the relay is operated, replace PLC board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		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 PLC board.
E22	Descaling pump cartridge fault.	24/230VAC supply voltage input fault.	Check supply voltage between input 24/230VAC on PLC 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.
		Fault with the PLC board switch S04.	Connect voltmeter between terminal S04 on PLC board and terminal Xb. Activate relay output S05 from the technical control screen. If voltage reads zero when the relay is operated, replace PLC board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		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.
		Boiler 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 PLC board.
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).
		Short circuit or wire broken in probe or input connection Bsc Com.	Disconnect probe Pt100 from PLC 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.
		PLC board electrical fault.	If probe and connections are functioning, replace PLC board.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
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).
		Short circuit or wire broken in probe or input connection Bsc Com.	Disconnect probe Pt100 from PLC 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.
		PLC board electrical fault.	If probe and connections are functioning, replace PLC board.
E32	Food probe not inserted.	-	Insert probe.
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 boiler 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.
		Gas pressure too low.	Check gas pressure at oven supply connection while 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 capacity of gas supply. (Expansion valve, pipe diameter.)

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Gas board output cavity ignitor (AL12) defective.	Connect voltmeter between terminal cavity ignitor (AL12) on add-on gas board (Aag) and terminal Xb. Activate relay output cavity ignitor (AL12) on technical control screen. If voltage reads zero when relay is operated, replace add-on gas board.
		Igniter has no power.	Connect voltmeter to the terminals of "convection" burner lighter. Activate relay output cavity ignitor (AL12) on technical control screen. If voltage reads zero when the relay is operated, check the lighter cabling and repair as required.
		Igniter is defective.	Activate output relay cavity ignitor (AL12) from the technical control screen. If lighter does not function, then replace.
		Incorrect flame sensor setting.	Check state and position of flame controller electrodes.
		Gas add-on board (Aag) is not receiving flame lit signal at PF1 (6 and 10 level cavity burner flame sense) (or PF2 (20 level 2nd cavity burner flame sense)).	Connect a voltmeter between PF1 (or PF2 in the case of oven 20N) and Xb. When burner is functioning, voltage must be 230V. If not, check flame control box cabling and repair or replace as required.
		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 boiler 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).

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Gas board AL3 output defective.	Connect voltmeter between terminal AL3 of the add-on gas board (Aag) et une terminal Xb. Operate output relay AL3 from the technical control screen. If voltage reads zero when relay is operated, replace the add-on gas board.
		Ignitor has no supply power.	Connect a voltmeter to the terminals of the boiler burner lighter. 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.
		Ignitor is defective.	Activate relay output AL3 from technical control screen. If boiler burner lighter 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. 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.	"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 +24VAC.
		Humidity" add-on board (Ahu) is not communicating with the PLC card.	Check for flashing on communication LED "green" and "orange" on the board. If they do not flash, change the add-on board.
		Humidity sensor probe is defective.	Replace humidity sensor probe.
E60	Convection fan not functioning.	If it exists, fuse "Ftmv" is blown.	Check state of fuse Ftmv and change if required
		Fuse F3 of the PLC board has blown.	Check fuse F3 on PLC board. If it is blown, find cause and replace with same type fuse.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Fuse Fm on PLC board has blown.	Check fuse Fm on PLC board. If it is blown, find cause and replace with same type fuse.
		Convection fan motor thermal protection is open.	Check fuse Fm on PLC 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, check cabling or change motor.
		Contactor Kp is not powered or defective.	Connect a voltmeter between the terminals A1 and A2 of main contactor Kp. Activate relay output Kp from the technical control screen. If voltage reads zero when relay is operated, check Kp cabling or replace PLC board. If the main switch Kp does not close when powered, replace the switch.
		Motor is not powered	Connect a voltmeter between terminals Xm1 and Xm0. Operate output switch Kp on technical control screen. If voltage is not between 208V and 240V, inspect cabling.
		Motor circuit cut.	POWER OFF, check continuity of circuit between the outputs S22 and S23 on PLC board and the terminal Xm0. If circuit is open, check cabling or change fan motor.
		Short-circuited Triac motor.	POWER OFF, measure continuity between the terminals E21 and S22 of the PLC board. If they are short-circuited, change the PLC board.
E70	Electronics overheat: temperature greater than or equal to 149°F.	Same as E71 Below	Same as E71 Below
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 PLC board has blown.	Check fuse F3 on PLC board. If it is blown, find cause and replace with same type of fuse.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
		Output S08 on PLC board is defective.	Connect voltmeter between terminal S08 on PLC board et une terminal Xb. Activate relay output S08 on technical control screen. If there is no voltage, replace PLC board.
		Cooling fan has no power.	Connect a voltmeter between the terminal ventilator power supply. Activate relay output S08 on technical control screen. 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 hot appliances.
		Air inlets require cleaning	Clean the cool air intake vents.
		Technical fan requires cleaning,	Clean cooling fan.
		Fuse F3 of the PLC board has blown.	Check fuse F3 on PLC board. If it is blown, find the cause and replace it with a fuse of the same value.
		Output S08 of the PLC board is defective.	Connect a voltmeter between the terminal S08 on the PLC board et terminal Xb. Activate relay output S08 on technical control screen. If there is no voltage, replace the PLC 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 it.
E80	Communication fault between boards.	Degraded communications cable. OR Defective PLC boards.	Test a new communication cable OR Check PLC boards and replace if needed.
E81	Break in communication between circuit boards.		
E82	SD Card faulty.	Service configuration contains an error.	Ensure serial number, code number, cloud URL are correct.
E83	Cloud error.	Cloud server is offline.	Ignore error until cloud server is back online.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
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 original error and potential causes.
E93	Ambient temperature too high fault (E72).	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.
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.
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.

ERROR CODE	SYMPTOM	PROBABLE CAUSE	ACTION
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 igniter. 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.

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.

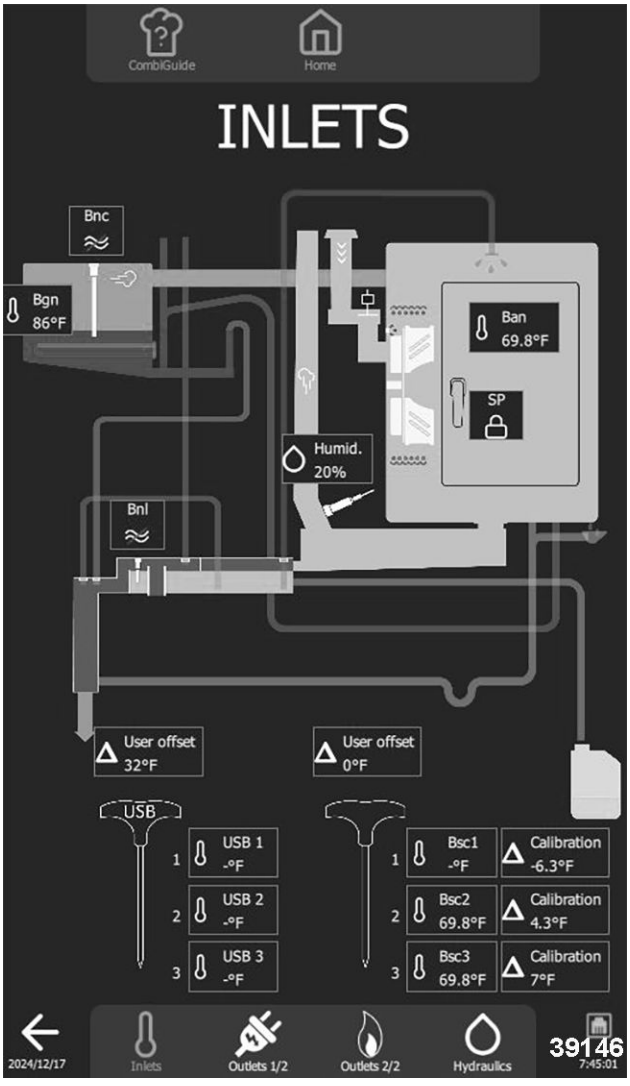


Fig. 207

INLETS		
Input	**Normal Status**	**Remarks**
Cavity and Safety Probe (Baa / Ban)	Cooking Cavity Temperature	-

INLETS		
Input	**Normal Status**	**Remarks**
Closed Door Reed Switch (Sp)	Door Position	Padlock Closed = Door Closed
		Padlock Open = Door Open
Washing / Sump Box Water Level Probe (BnL)	Washing / Sump Box Water Level	Red line through Symbol = No Water
Steam Generator Water Level Probe (Bnc)	Steam Generator Water Level	Red line through Symbol = No Water
Steam Generator Temperature Probe (Bgn)	Steam Generator Temperature	-
3 Point Core Probe (Bsc1...3)	Core Probe Temperature	-
Humid.	Humidity Rate	-

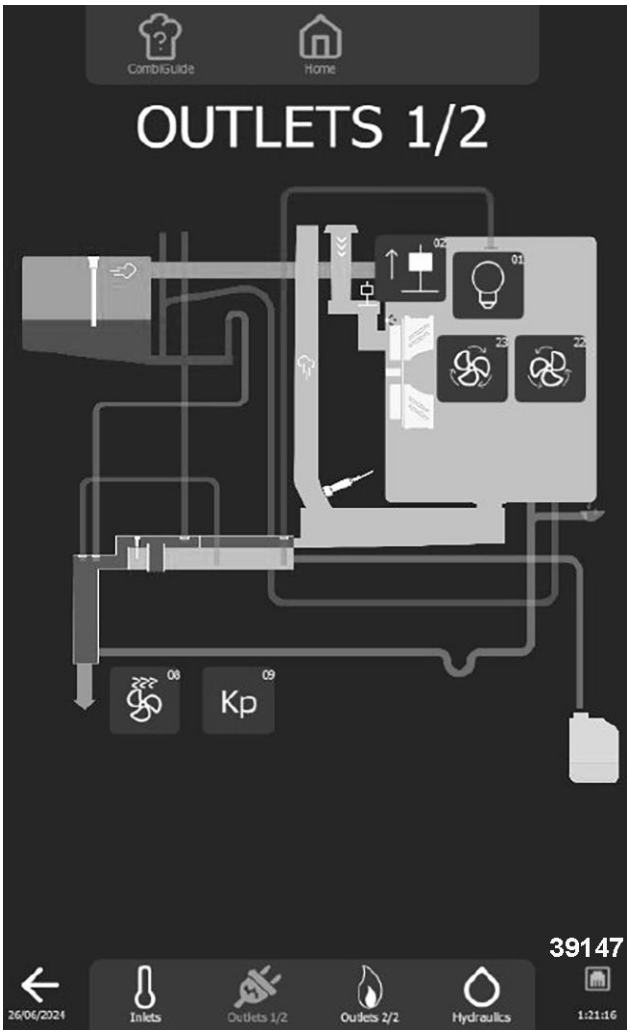


Fig. 208

OUTLETS 1/2		
No. Outlet	**Components**	**Operating**
01	LED Lighting	1 press on the button activates the lighting for 60s.

OUTLETS 1/2		
No. Outlet	**Components**	**Operating**
02	In Flapper Motor	1 press on the button activates the flapper for 60s.
08	Technical Fan	1 press on the button activates the fan for 5s.
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)	press on the button activates the turbine for 5s.

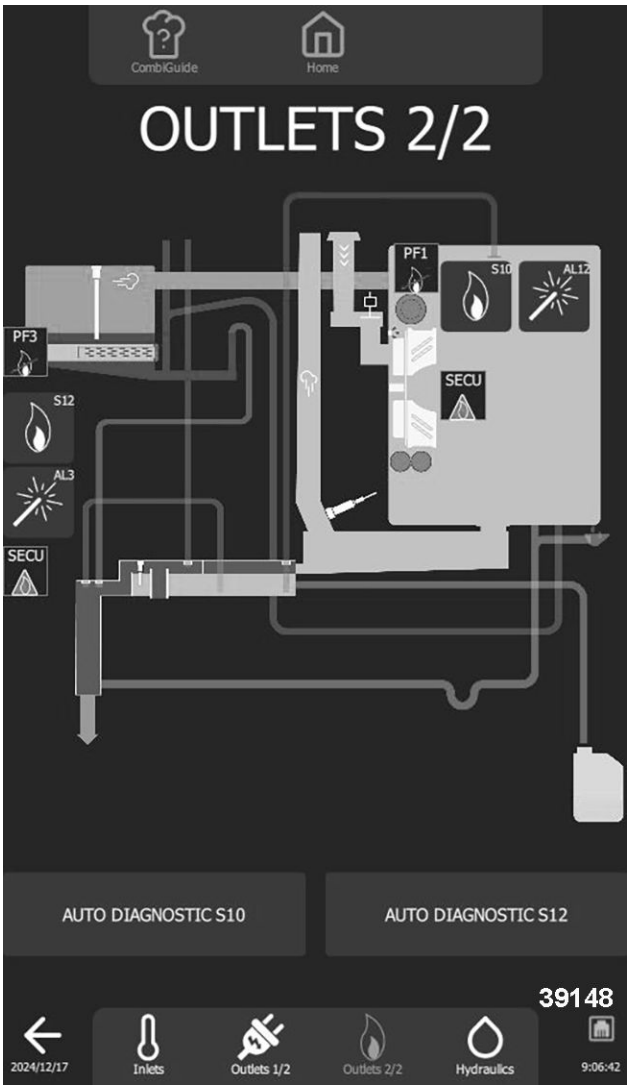


Fig. 209

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

OUTLETS 2/2 GAS OVENS		
No. Outlet	**Components**	**Operating**
Ignitor (AL12)	Ignitor	1 press on the button, activates the igniter(s) for 5s.
(AL3)	Steam Generator Ignitor	1 press on the key, activates the igniter(s) 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 them 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).

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 button 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. This causes the relay on the gas board to close, initiating an ignition cycle.
2. Repeat Step 1 if fails.
   - If the 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 elements (igniters, gas board, etc.).
3. Repeat Step 1 again for a third time, if fails.
   - If 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. 210

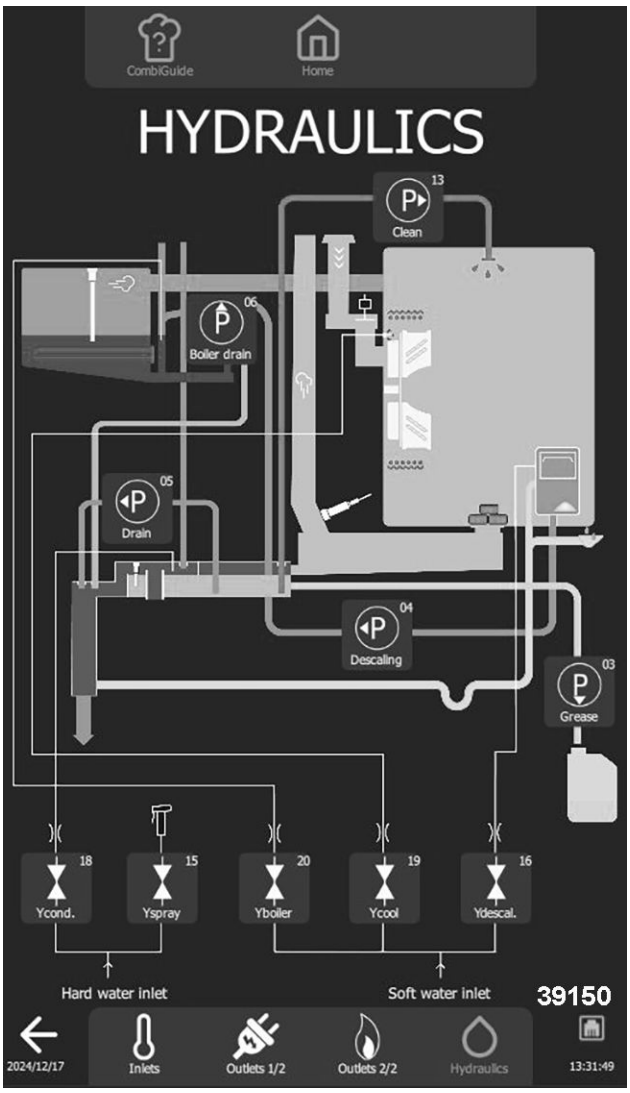


Fig. 211

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.	Igniter does not work.	Refer to "gas igniter 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
Igniter 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 FLOWCHARTS

SCREEN INOPERATIVE OR BLOCKED (Fig. 212)

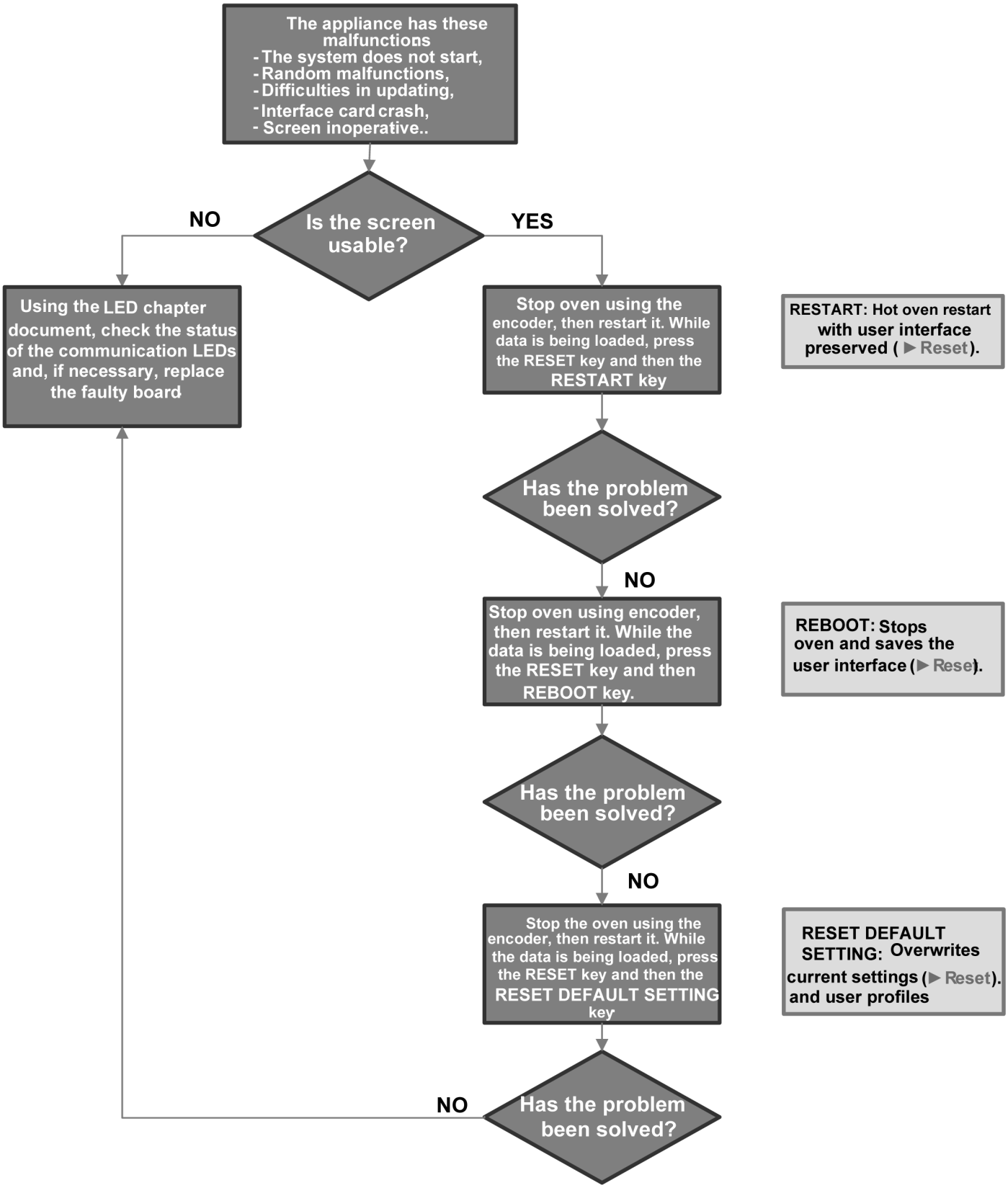
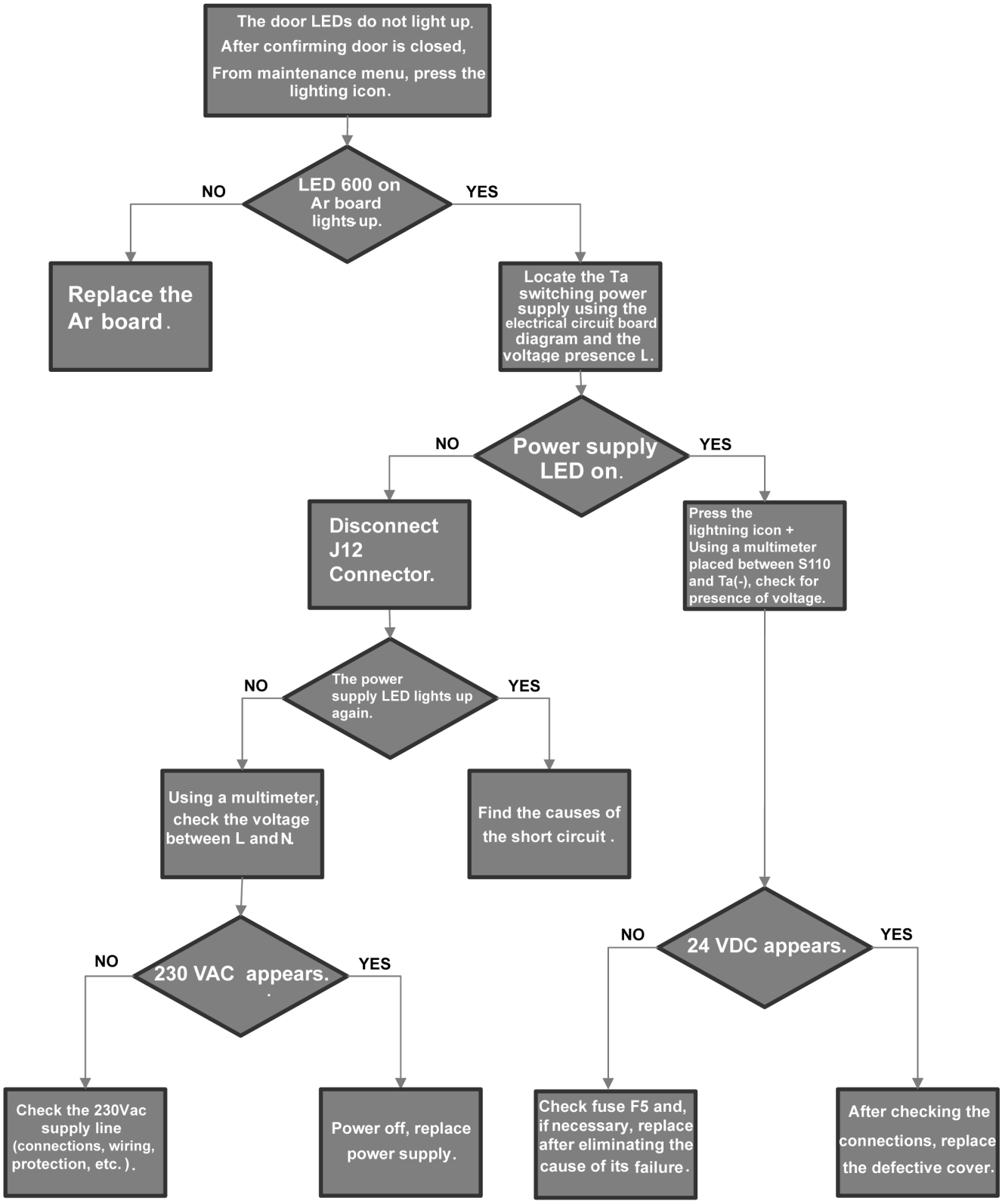
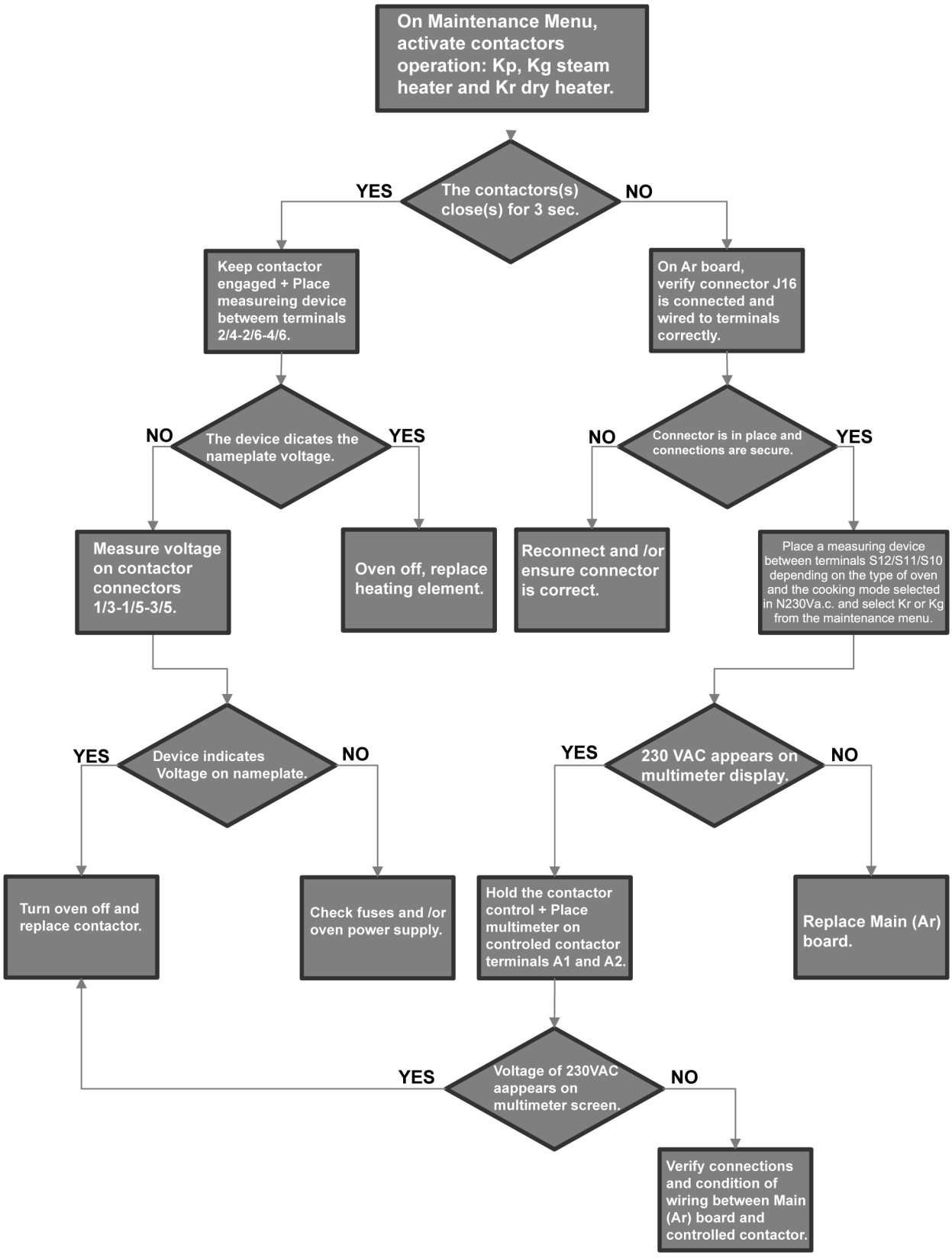

The appliance has these malfunctions
- The system does not start,
- Random malfunctions,
- Difficulties in updating,
- Interface card crash,
- Screen inoperative..
Is the screen usable?
NO
YES
Using the LED chapter document, check the status of the communication LEDs and, if necessary, replace the faulty board
Stop oven using the encoder, then restart it. While data is being loaded, press the RESET key and then the RESTART key
RESTART: Hot oven restart with user interface preserved (► Reset).
Has the problem been solved?
NO
Stop oven using encoder, then restart it. While the data is being loaded, press the RESET key and then REBOOT key.
REBOOT: Stops oven and saves the user interface (► Reset).
Has the problem been solved?
NO
Stop the oven using the encoder, then restart it. While the data is being loaded, press the RESET key and then the RESET DEFAULT SETTING key
RESET DEFAULT SETTING: Overwrites current settings (► Reset). and user profiles
NO
Has the problem been solved?
AI5786

Fig. 212

LIGHTING FAULT OF COOKING CAVITY (Fig. 213)


The door LEDs do not light up.
After confirming door is closed,
From maintenance menu, press the lighting icon.
LED 600 on Ar board lights up.
NO
YES
Replace the Ar board.
Locate the Ta switching power supply using the electrical circuit board diagram and the voltage presence L.
Power supply LED on.
NO
YES
Disconnect J12 Connector.
Press the lightning icon + Using a multimeter placed between S110 and Ta(-), check for presence of voltage.
The power supply LED lights up again.
NO
YES
Using a multimeter, check the voltage between L and N.
Find the causes of the short circuit .
230 VAC appears.
NO
YES
24 VDC appears.
NO
YES
Check the 230Vac supply line (connections, wiring, protection, etc.).
Power off, replace power supply.
Check fuse F5 and, if necessary, replace after eliminating the cause of its failure.
After checking the connections, replace the defective cover.

ELECTRIC HEATER FAULT (Fig. 214)


On Maintenance Menu, activate contactors operation: Kp, Kg steam heater and Kr dry heater.
The contactors(s) close(s) for 3 sec.
YES
NO
Keep contactor engaged + Place measureing device betweem terminals 2/4-2/6-4/6.
On Ar board, verify connector J16 is connected and wired to terminals correctly.
The device dicates the nameplate voltage.
NO
YES
Connector is in place and connections are secure.
NO
YES
Measure voltage on contactor connectors 1/3-1/5-3/5.
Oven off, replace heating element.
Reconnect and /or ensure connector is correct.
Place a measuring device between terminals S12/S11/S10 depending on the type of oven and the cooking mode selected in N230Va.c. and select Kr or Kg from the maintenance menu.
Device indicates Voltage on nameplate.
YES
NO
230 VAC appears on multimeter display.
YES
NO
Turn oven off and replace contactor.
Check fuses and /or oven power supply.
Hold the contactor control + Place multimeter on controled contactor terminals A1 and A2.
Replace Main (Ar) board.
Voltage of 230VAC aappears on multimeter screen.
YES
NO
Verify connections and condition of wiring between Main (Ar) board and controlled contactor.

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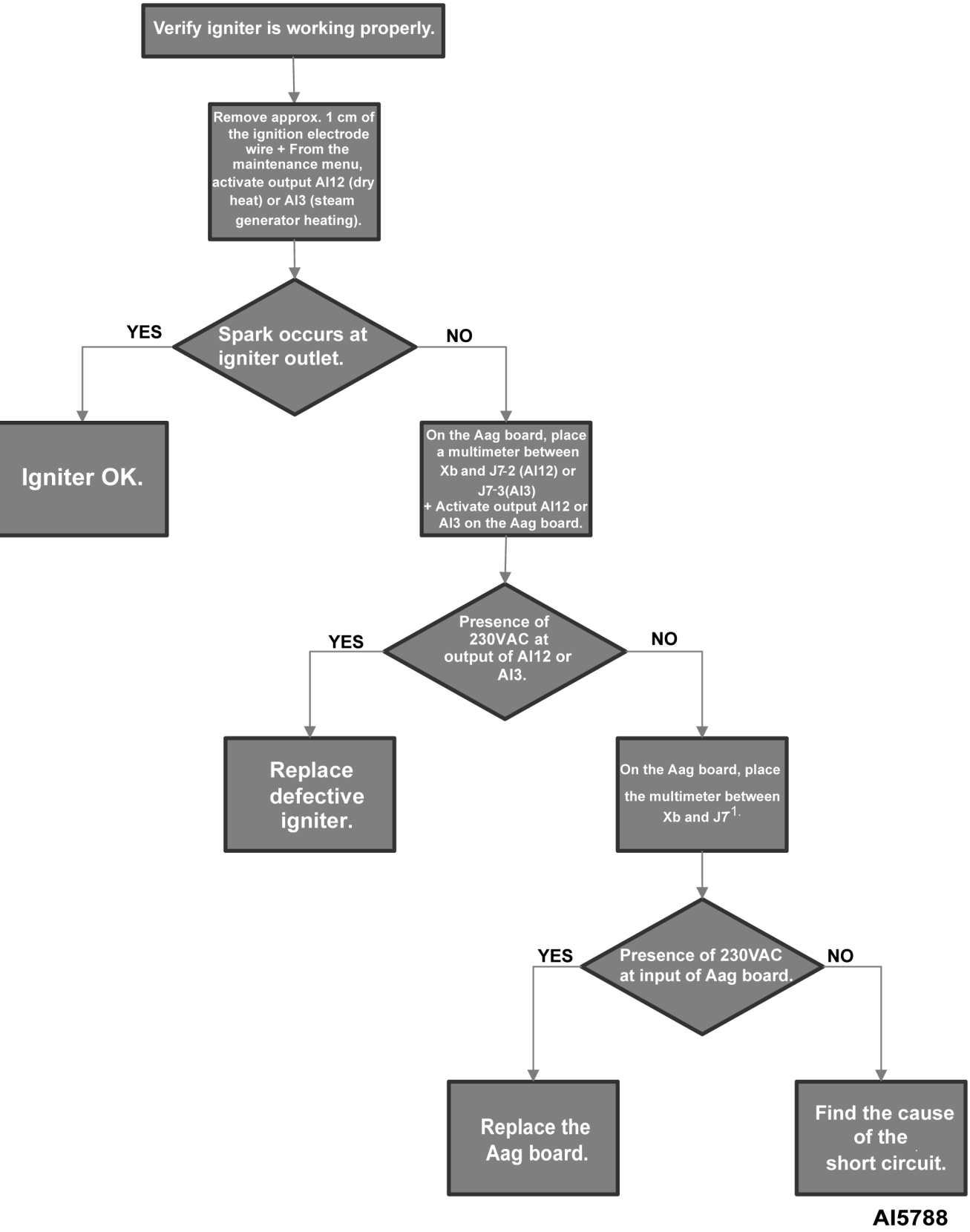
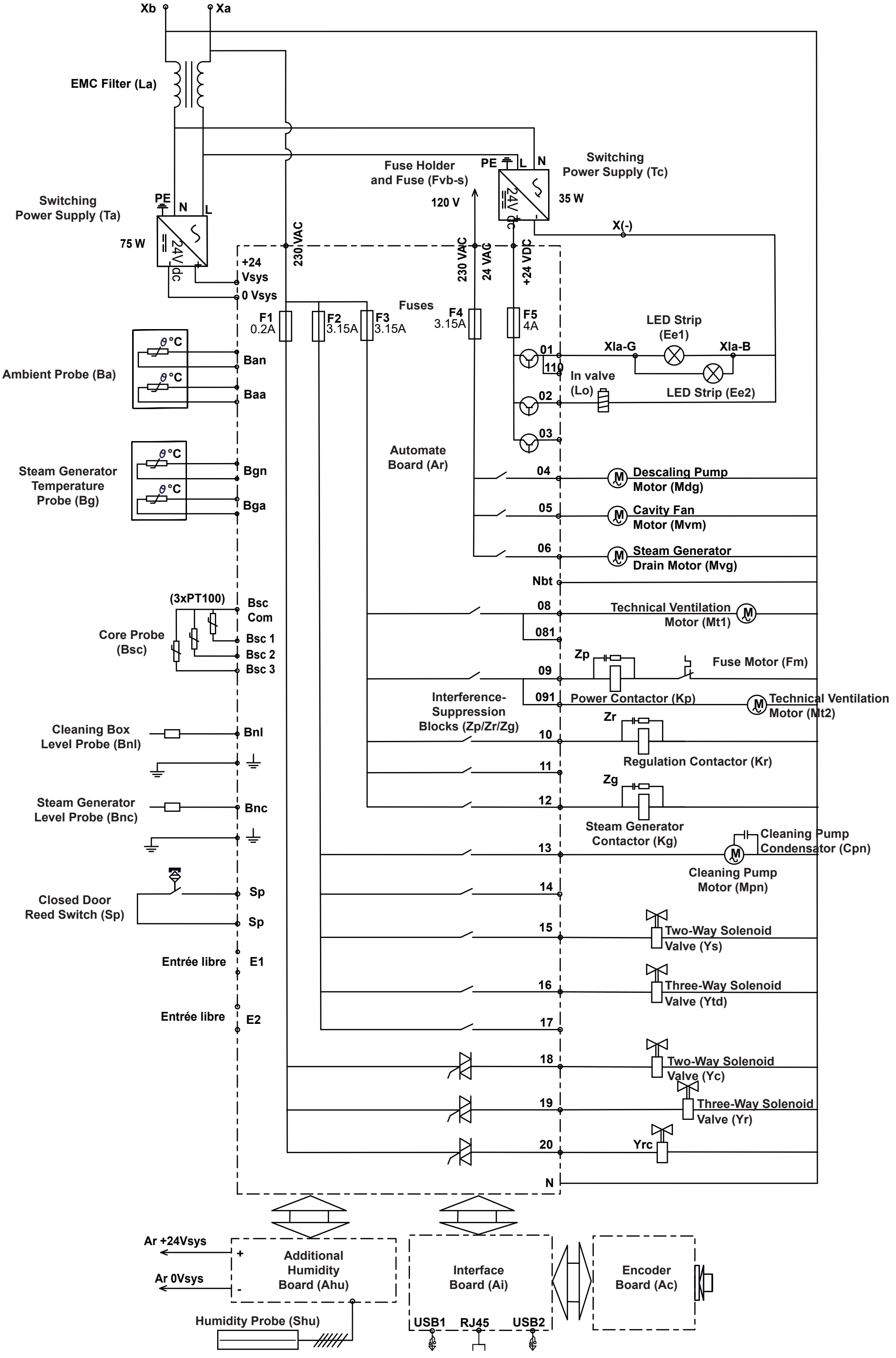
GAS IGNITER FAULT (Fig. 215)


Verify igniter is working properly.
Remove approx. 1 cm of the ignition electrode wire + From the maintenance menu, activate output AI12 (dry heat) or AI3 (steam generator heating).
Spark occurs at igniter outlet.
YES
NO
Igniter OK.
On the Aag board, place a multimeter between Xb and J7-2 (AI12) or J7-3(AI3) + Activate output AI12 or AI3 on the Aag board.
Presence of 230VAC at output of AI12 or AI3.
YES
NO
Replace defective igniter.
On the Aag board, place the multimeter between Xb and J7-1.
Presence of 230VAC at input of Aag board.
YES
NO
Replace the Aag board.
Find the cause of the short circuit.
AI5788

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.



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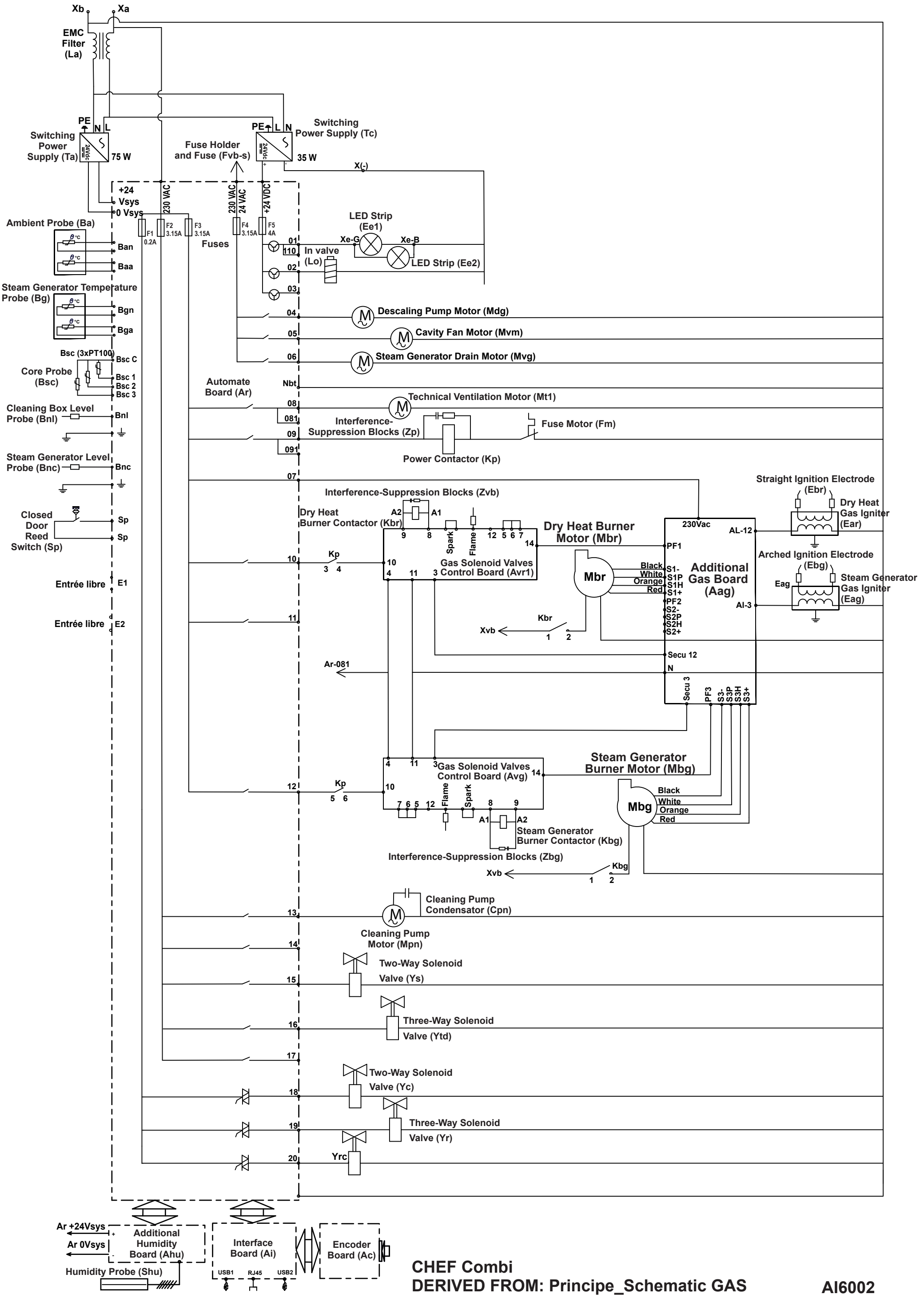

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