SERVICE MANUAL

TCM GAS COMBI OVEN

TCM-61G-NAT/LP (VPJ071G-81)
TCM-101G-NAT/LP (VPJ101G-81)
TCM-102G-NAT/LP (VPJ102G-81)

- 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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3600 North Point Blvd Baltimore, MD 21222
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SERVICE UPDATES

SERVICE UPDATES

May 2023

- Updated ACCESS MAINTENANCE SCREENS.
- Updated ERROR CODES.
- Updated TROUBLESHOOTING - GAS COMPONENTS.
- Updated TECHNICAL COMPONENTS.

February 2023

- Updated TOOLS.
- Updated WATER QUALITY STATEMENT.
- Updated SPECIFICATIONS.
- Updated FILTERED WATER PRESSURE RESTRICTOR.
- Updated CONTROL PANEL BOARD.
- Updated OUTPUT CONTROL ASSEMBLY .
- Updated GAS TRANSFORMER.
- Added diagrams in DIAGRAMS
- Updated CONVECTION MOTOR RESISTANCE.
- Updated SOLENOID VALVES.
- Updated ORIFICE.
- Updated GAS COMPONENTS.
- Updated SOFTWARE VERSION HISTORY.
- Updated SOFTWARE UPDATE PROCEDURE.
- Updated PROGRAMING.
- Updated BOARDS.
- Updated TROUBLESHOOTING.
- Updated TROUBLESHOOTING - GAS COMPONENTS.

GENERAL

INTRODUCTION

- Multiple cooking capabilities from one piece of equipment: Baking, Steaming, Roasting, Grilling, Air-Fry, Rethermalization, Proofing, Finishing, Poaching, Stewing, Low Temp, Defrosting, Cook & Hold, and more.
- FastPAD® toughened glass control panel: comprising a large color LCD touch screen and coding turn/push knob.
- Auto reverse fan, adjustable from 1 to 100%.
- Rapid product drying by opening the motorized vent, for a crispier exterior.
- Automatic adjustment of the oven power to suit the load being cooked, for results that are always to the precise degree required.
- Automatically switches to energy saving mode after a period of inactivity (adjustable).
- Temperature with visual display of Set and Actual. User Interface including Manual displays for ABC, JET or ECO operator functions. ABC automatically adjusts humidity after setting temperature. ABC and JET features always on function, no start button to activate. JET for manual convection, steam and combi settings. ECO for required start button activation providing maximum energy savings.
- Full Cleaning System»: Automatic cleaning.

COOKING MODES

- Convection from 32 to 480°F - Saturated steam: steam to 200°F.
- Combi from 85 to 480°F (with humidity adjustable from 0 to 99%) - Low temperature: steam from 85 to 207°F.
- High temperature steam: steam from 208 to 220 °F.
- Regeneration.
- Delta T.

AUTOMATIC COOKING MODE

- 80 preloaded recipes as standard with the option to adjust the degree of cooking and the coloration.
- It is possible to create entirely personalized recipes.
- Displayed as text or as pictures via the library within the oven.
- Recipes are classified by family and / or in « my recipes ».

SERVICE MODE

- Toolbox screen to access error logs and service diagnostics.
- Transfer recipes and photographs via a computer.
- Parameters can be modified to give maximum personalization.
- Visual Diagnostic System: interactive screen intended for technicians.

- **FUNCTIONS**
- Automatic oven cavity cooling, door closed: improved reactivity.
- Humidifier : provides instant steam (shot of vapor): ideal for bread.
- Hold function : temperature holding phase after cooking (semi static oven). Avoids the surface of the product drying out.
- Automatic rinse possible between cooking operations.
- Timer: continuous up to 99:00 hours and minutes with set, remaining or count time displayed.
- Timer reloads for batch cooking after completion of timed cycle (ABC).
- Multi timer: cooking times can be programmed for each level : bringing greater flexibility during service.
- Flashing LED lights & audible alarm system alert user when cooking cycle finished.

EQUIPMENT

- Cool touch athermic double glazed clipped door with left or right hand rotation of the handle to open, hinged to the left and a simple push closure. Opens to 180° with hinged internal glass to make cleaning easier.
- Cavity illumination by a strip of LEDs in the door.
- Features electrical protection, a door safety and thermal overload protection.

STANDARD SUPPLY

- 1 set of side support runners and racks.
- Core probe socket allowing the use of a removable core probe.
- USB port.

TOOLS

Standard

- Standard set of hand tools.
- 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 listed.
- Temperature tester (thermocouple type).
- Field service grounding kit.

Special

- Gas combustion analyzer and manometer.
    - Combustion analyzer Bacharach Fyrite Pro 125 Bacharach model# 24-8105 or Fyrite "Insight" Model 24-8251.
    - Manometer U tube Part No. TL-84908 or equivalent.
- Set of jeweler's screwdrivers.
- Thumb drive.
- RECTORSEAL 5® or equivalent NSF rated thread sealant.
- Rod / Gauges
    - Rod / gauge by 6mm diameter for electrode flame detection.
    - Rod / gauge by 3mm and 4mm diameters for ignition electrodes.
- High Temperature Silicone.
- High Temperature Quality Grease.
- Hub Puller.

WATER QUALITY STATEMENT

The fact that a water supply is potable is no guarantee that it is suitable for steam generation. Proper water quality can improve the taste of the food prepared in the oven, reduce scale build-up or corrosion, and extend equipment life. Local water conditions vary from one location to another and can change throughout the year. The recommended water treatment for effective and efficient use of this equipment will vary depending on the local water conditions. Your water supply must be within the general guidelines outlined in the chart below at all times during use of this machine or service issues not covered under warranty may result.

NOTE: Failure to properly maintain water quality or preventative procedures for water can lead to issues not covered under warranty.

WATER SUPPLY GENERAL GUIDELINES CHART [1]	
Supply Pressure (dynamic flow)	30-60 psig
Hardness	less than 3 grains (17.1 ppm = 1 grain of hardness)
Silica	less than 13 ppm
Chloramines [2]	zero
Chlorides [2]	less than 30 ppm [3]
Total Chlorine [4]	zero
PH	range 7-8
Un-Dissolved Solids	less than 5 microns
Drain Line	Drain line pee trap must be installed at back of unit to open gap floor sink.

[1] Testing of water is always done AFTER water filter or water treatment used. Water quality does change with usage and should be checked periodically to see if the condition worsens.

[2] A carbon block filter system should always be used to remove Chlorine and Chloramine. If a water softener is used, a carbon block is still required. Check with your local water treatment specialist for proper sizing and replacement intervals for the carbon block cartridge.

[3] If the Chlorides exceed 30 ppm and the oven is used more than 8 hours during the day in steam or combination mode the cavity will require rinsing every 8 hours. Failure to do so will result in corrosion and rusting of the oven cavity and interior parts. A Reverse Osmosis water treatment system can be installed to eliminate chlorides from the water and reduce the hardness. Preventative washing and rinsing may be needed more than once a day to prevent compounding of contaminants inside cavity.

[4] Total Chlorine of 4.0 ppm is the max limit for the building water supply. A carbon block filter must still be used to remove all Chlorine and Chloramines from the water. Failure to do so will result in corrosion and rust in the cooking cavity which is not covered under warranty.

Water hardness should be treated by removing the impurities (water softener with carbon block or dechlorinator and/or in-line water treatment). Low water hardness may also require a water treatment system to reduce potential corrosion. Water treatment has been shown to reduce costs associated with machine cleaning, reduce deliming and reduce corrosion of metallic surfaces.

Daily washing and rinsing of the cavity is required. In some cases it may be needed more than once a day to prevent compounding of contaminants deposited inside cavity even with acceptable filtration. Failure to wash and rinse down the cavity daily could result in damage of the oven cavity and interior parts. A Reverse Osmosis water treatment system can be

installed to eliminate chlorides or other contaminates from the water if needed.

STAINLESS STEEL STATEMENT

Stainless steel has a thin protective sheet formed on the metallic surface to protect it against corrosion. Anything facilitating its partial destruction (food residues, overflow of liquids, stagnant liquids, etc.) reduces the resistance of stainless steel to corrosion. While the composition of stainless steel enables it to withstand some chemical aggression better than classical steels, it is not indestructible. Three main factors contributing to corrosion should be watched for:

- Chemical environment.
- Temperature.
- Duration of contact.

The combination of these three factors may lead to the eventual destruction of parts of the equipment, even if they have been made in very high-quality stainless steel. Generally, cleaning products, which are not appropriate or are improperly used, lack of maintenance, or extreme conditions of use are often found to be the cause of damage.

SPECIFICATIONS

Electrical						
Model	**Art**	**Voltage**	**kW**	**Amps**	**Natural**	**Propane**
VPJ071G	TCM-61G-NAT/LP	120	0.4	3.3	55,959	54,253
		208	0.4	1.9	55,959	54,253
		240	0.4	1.7	55,959	54,253
VPJ101G	TCM-101G-NAT/LP	120	0.4	3.3	93,151	90,080
		208	0.4	1.9	93,151	90,080
		240	0.4	1.7	93,151	90,080
VPJ102G	TCM-102G-NAT/LP	120	0.6	5	155,594	150,810
		208	0.6	2.9	155,594	150,810
		240	0.6	2.5	155,594	150,810

Gas Pressure	
Natural	6 - 10 WC
Propane	10 - 15 WC

REMOVAL AND REPLACEMENT OF PARTS

SIDE PANEL

⚠ WARNING

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

1. Remove side panel mounting screws.

NOTE: Two flat screws and three hex screws located on bottom tabs.

Fig. 1

2. Angle panel to pull down lip on top of panel to pull off.
3. Reverse procedure to install.

BACK PANEL

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL .
2. Remove REAR LEFT SIDE PANEL.
3. Remove back panel mounting screws.

Fig. 2

4. Reverse procedure to install.

DOOR PANEL

1. Open door.
2. Remove door panel mounting screws on door side and inside on panel.

Fig. 3

3. Carefully remove panel.
4. Reverse procedure to install.

FRONT CONTROL PANEL

⚠ WARNING

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

NOTE: Access encoder, display board, and some connections to prevent right side panel removal.

1. Remove 7 mm bolt (1, Fig. 4) on bottom of front control panel.

Fig. 4

2. Lift up on panel and turn right to open door.
3. Reverse procedure to install.
4. Verify proper operation.

STEAM AND WASH SOLENOID ASSEMBLY

⚠ WARNING

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

1. Shut off filtered and unfiltered water supplies.
2. Remove RIGHT SIDE PANEL.
3. Remove BACK PANEL.
4. Note and disconnect wiring from solenoids.

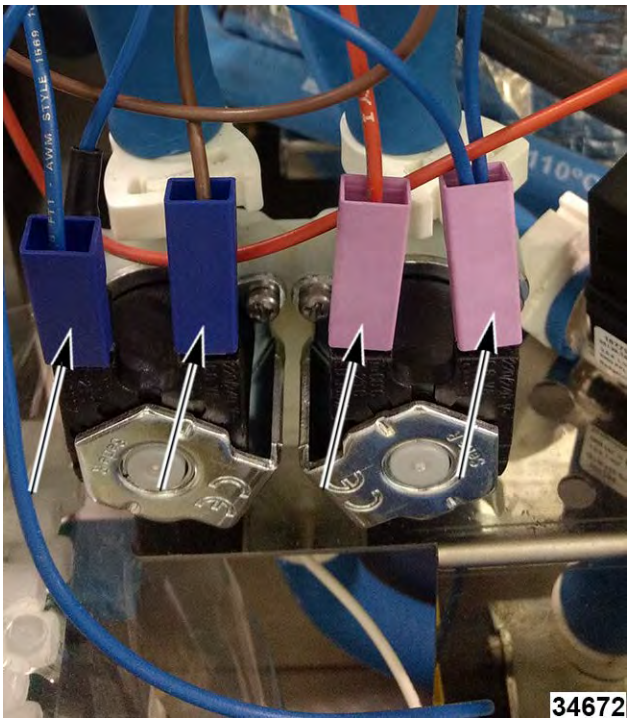


Fig. 5

5. Disconnect hoses fitting underneath bracket.

Fig. 6

6. Remove mounting screws.
7. Disconnect hoses on top.
8. Reverse procedure to install.

FILTERED WATER PRESSURE RESTRICTOR

⚠ WARNING

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

1. Remove BACK PANEL.
2. Shut off filtered and unfiltered water supplies.
3. Disconnect filtered water supply from oven inlet filter assembly.

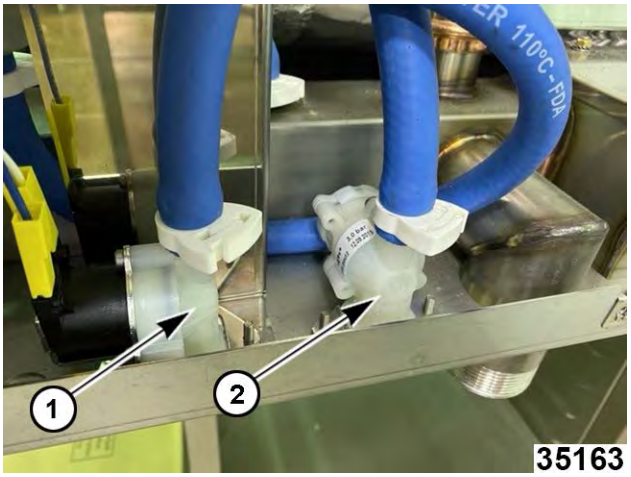


Fig. 7

4. Unthread inlet filter assembly from filtered water flow restrictor.
5. Disconnect hose from filtered water flow restrictor.
6. Remove fasteners and filtered water flow restrictor from frame.
7. Reverse procedure to install.

CONTROL PANEL BOARD

⚠ WARNING

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

1. Remove FRONT CONTROL PANEL.
2. Note and disconnect wiring (1, Fig. 8).

Fig. 8

3. Remove rubber stops (2, Fig. 8).
4. Remove nuts and spacers (1, Fig. 9).

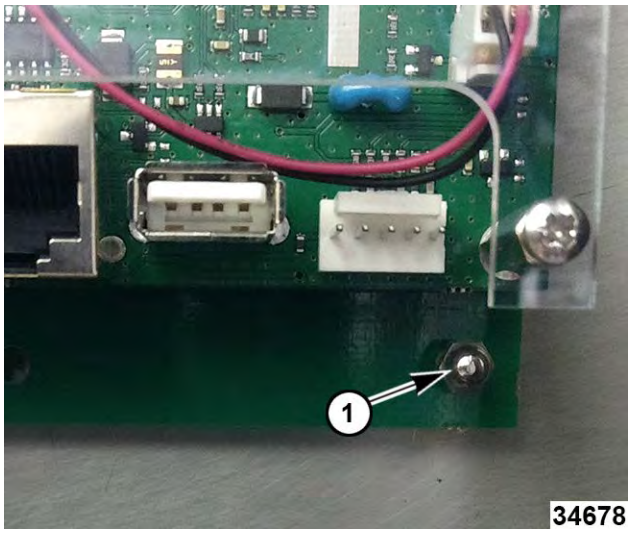


Fig. 9

5. Remove board cover standoff screws.
6. Disconnect board (1, Fig. 10) buzzer (2, Fig. 10) wiring connector.

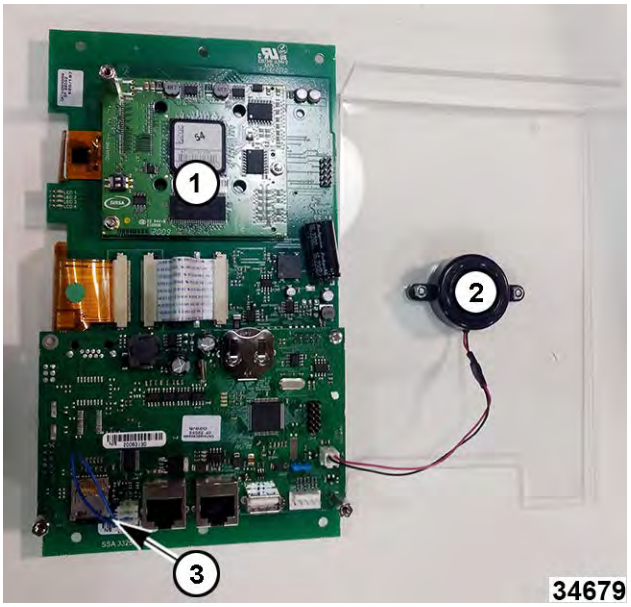


Fig. 10

7. Remove jumper (1, Fig. 11) from board and instill on new board.

Fig. 11

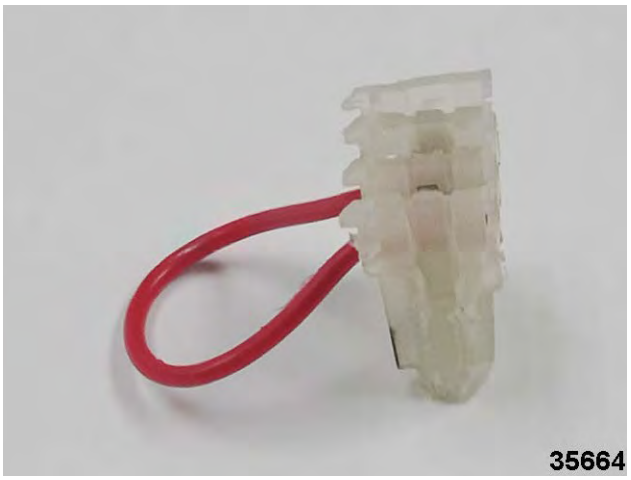


Fig. 12

8. Reverse procedure to install.

NOTE: Control panel board has a battery back-up to restore memory.

ENCODER

⚠ WARNING

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

1. Pull encoder knob (1, Fig. 13) off control panel.

Fig. 13

2. Remove nut and washer (Fig. 14).

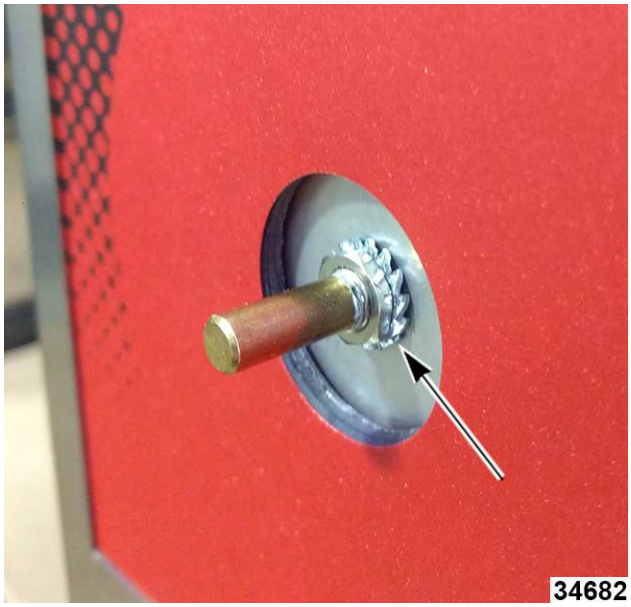


Fig. 14

3. Remove FRONT CONTROL PANEL.
4. Remove encoder from panel.

Fig. 15

Fig. 16

5. Reverse procedure to install.

NOTICE

Verify flat edges on encoder align with flat edges on mounting hole (Fig. 17) in panel.

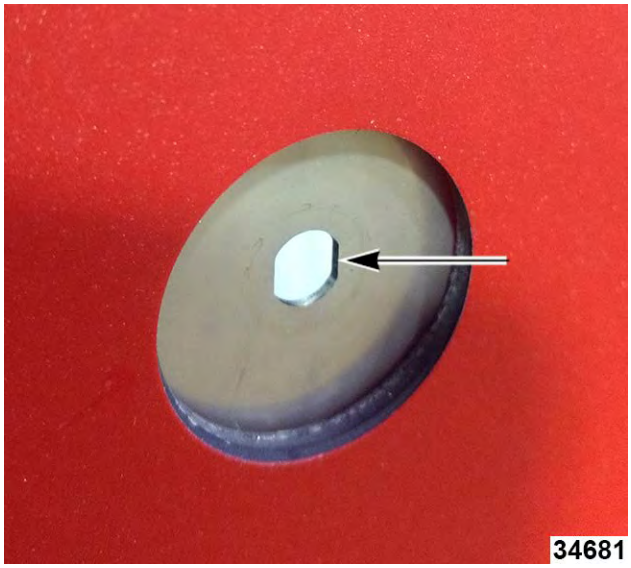


Fig. 17

BUZZER

⚠ WARNING

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

1. Remove FRONT CONTROL PANEL.
2. Remove buzzer from control panel cover.

Fig. 18

3. Reverse procedure to install.

HIGH LIMIT THERMOSTAT

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect wiring from high limit thermostat (1, Fig. 19).

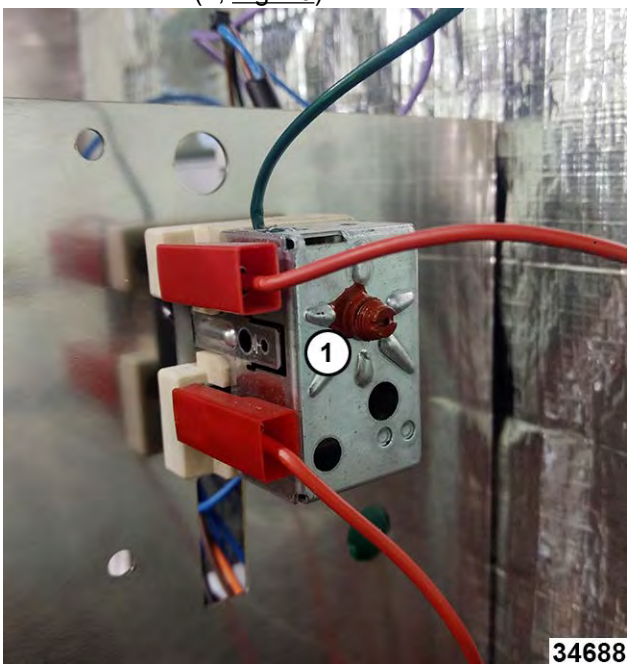


Fig. 19

3. Remove .
4. Cut insulation and slide bulb out from center of protective mounting bracket (1, Fig. 20).

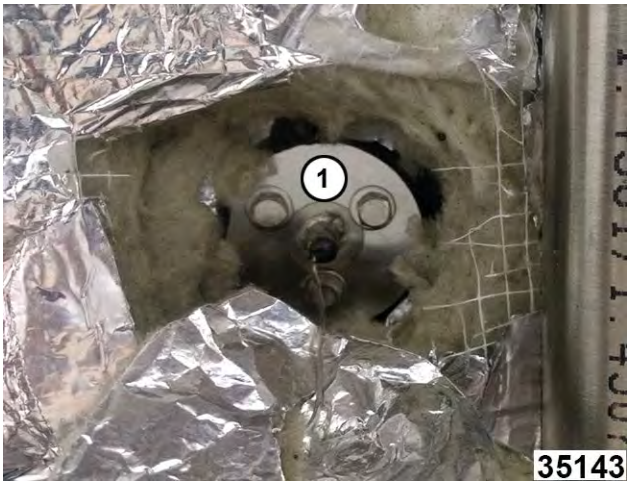


Fig. 20

5. Disconnect wiring of capillary bulb.

6. Connect wiring of bulb to re-install.
7. Apply silicone to end of capillary bulb (1, Fig. 20) to hold high limit in place on protective bracket.

Fig. 21

8. Slide new capillary bulb into bracket in oven.

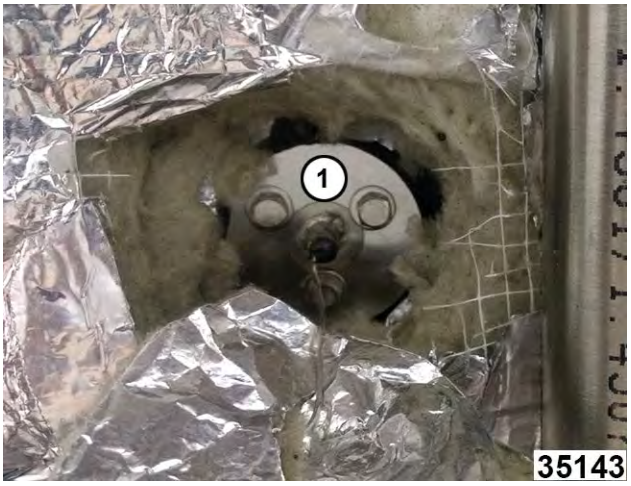


Fig. 22

9. Verify capillary bulb is flush against exterior top cavity surface.
10. Secure installation with heat tape.

NOTICE

Make sure insulation blanket covers capillary bulb and is sealed by high temperature tape.

11. Reverse procedure to install.

OUTPUT CONTROL ASSEMBLY

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect wiring from board.

Fig. 23

- 2 - Door switch connector.
- 3 - Core probe connector.
- 4 - Supply connector.

- 1 - Output connectors.

3. Remove one screw from transformer. Pivot transformer up and to the right for board removal.

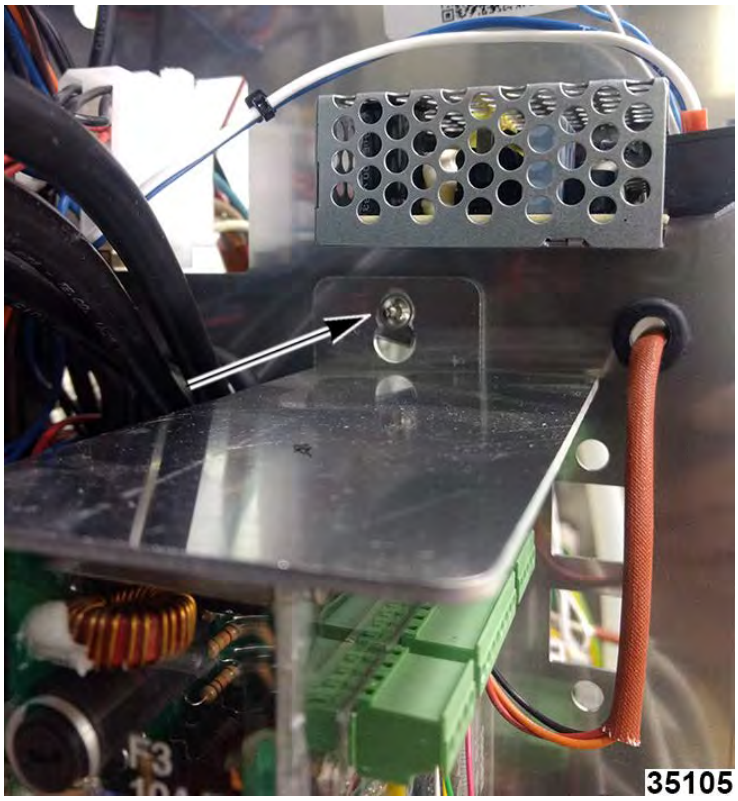


Fig. 24

4. Reverse procedure to install.

NOTICE

Verify configuration of the microswitches when installing new board.

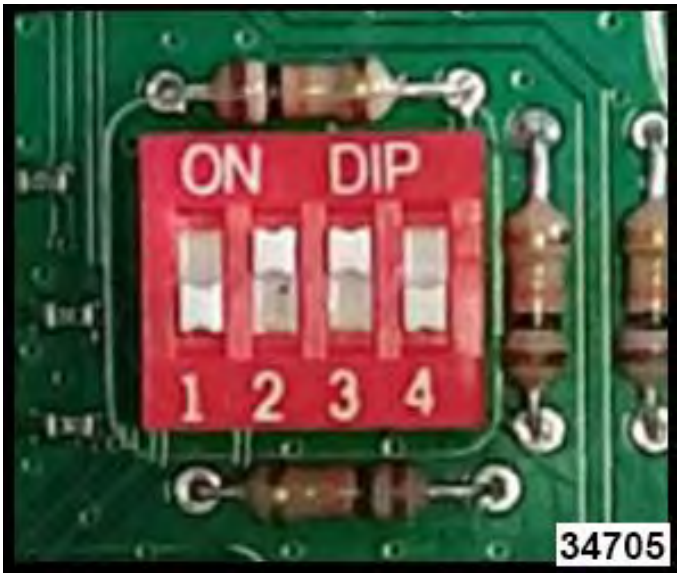


Fig. 25

Fig. 26

OUTPUT CONTROL ASSEMBLY RELAY BOARD

⚠ WARNING

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

1. Remove OUTPUT CONTROL ASSEMBLY .
2. Remove screws and control output assembly back cover.

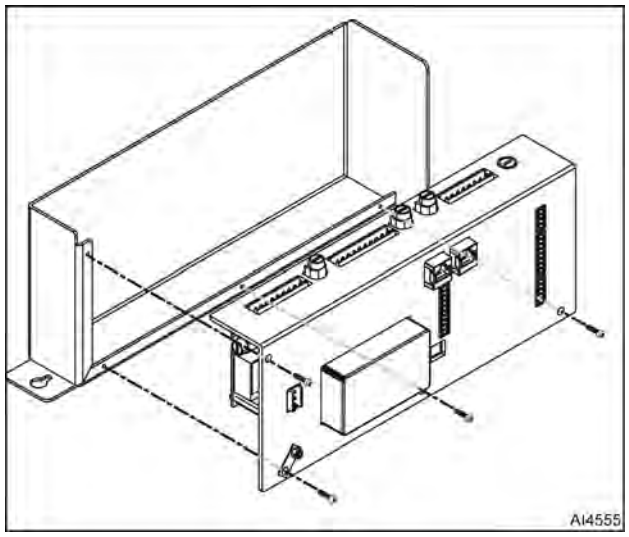


Fig. 27

3. Remove relay board from output control assembly.
4. Reverse procedure to install.

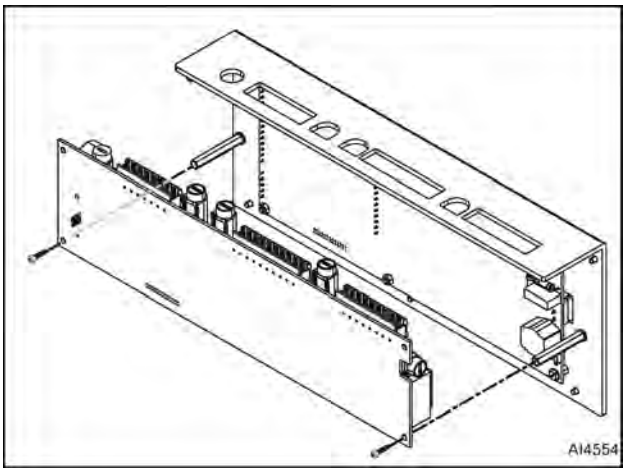


Fig. 28

FUSES

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Access fuses on side of output control assembly.

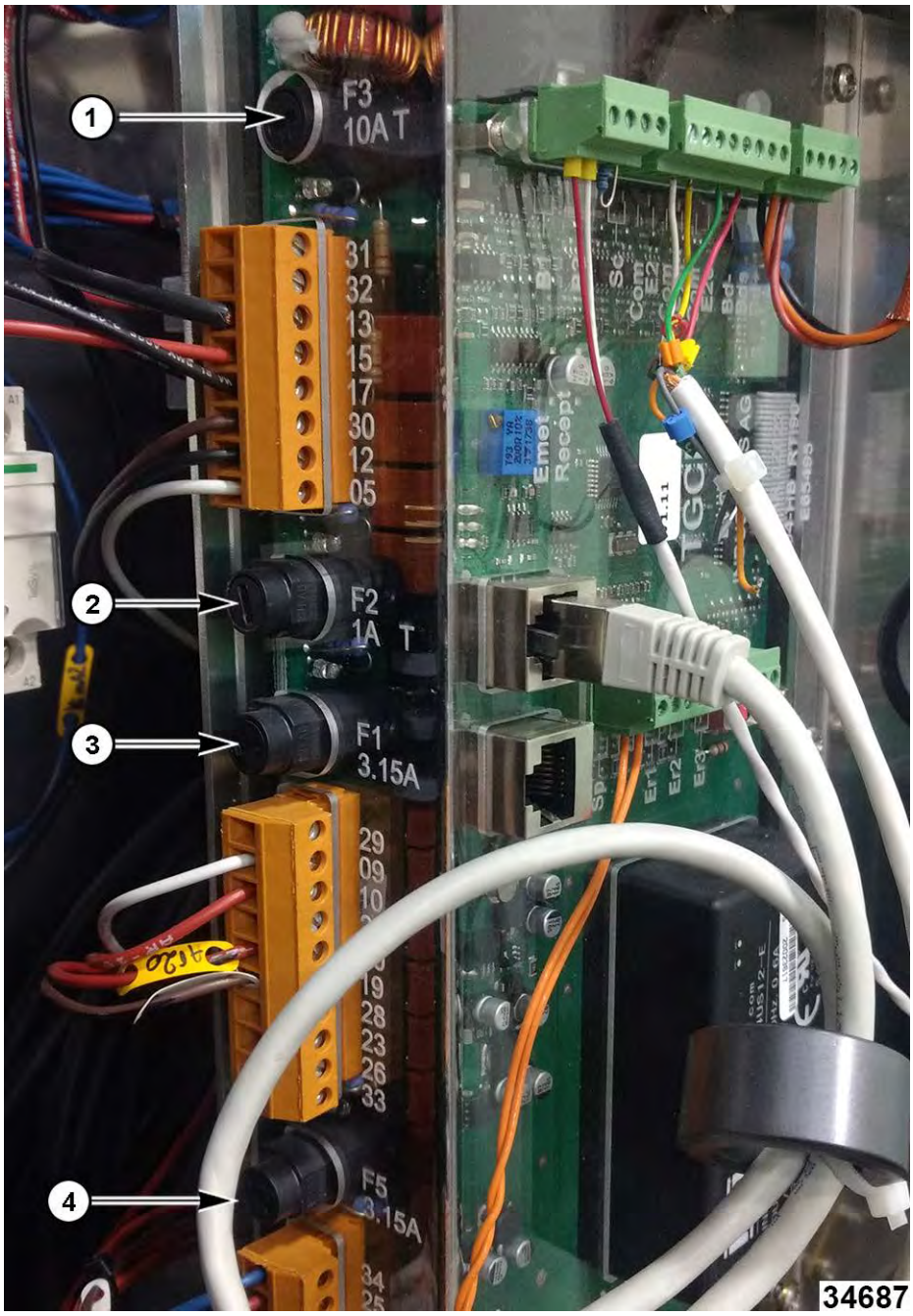


Fig. 29

- 1 - F3, 10 Amps, Time Delay
- 2 - F2, 1 Amp, Time Delay
- 3 - F1, 3.15 Amps, LED
- 4 - F5, 3.15 Amps, Status LED
- On bottom end,
  not shown - F4m 3.15 Amps, Status LED

3. Reverse procedure to install.

FAN

⚠ WARNING

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

1. Open oven door.

NOTICE

Lay cardboard on bottom of oven to protect surface during service.

2. Remove racks from oven.
3. Remove sheath (1, Fig. 30) mounting screws and lift off.

Fig. 30

4. Remove water inlet pipe mounting screw (1, Fig. 31) to remove pipe.

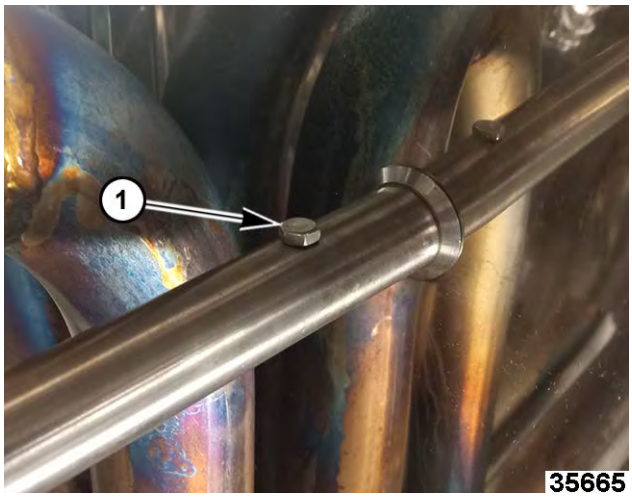


Fig. 31

5. Remove turbine (1, Fig. 32) mounting hardware, (screw, washer, atomizer, washer).

NOTE: Use 10 MM socket for bolt removal.

NOTE: Add heat for removal until turbine is released.

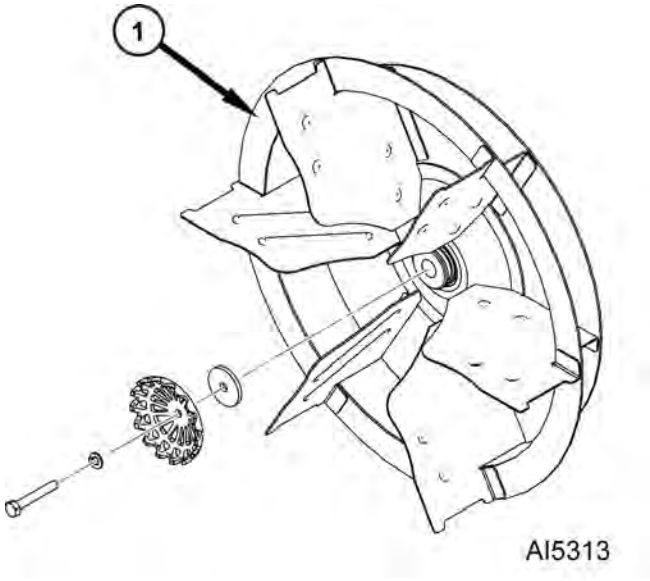


Fig. 32

6. Remove turbine.
   A. Align puller in place.
   B. Hold turbine in place while turning screw on the hub puller with wrench until turbine is released.
   C. Remove hub puller and turbine.
7. Reverse procedure to install.

- Place fan on motor shaft and tap with mallet. install atomizer and hardware and torque bolt
- Verify proper operation.

RECIRCULATING WASH PUMP CAPACITOR

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect capacitor wiring (1, Fig. 33).

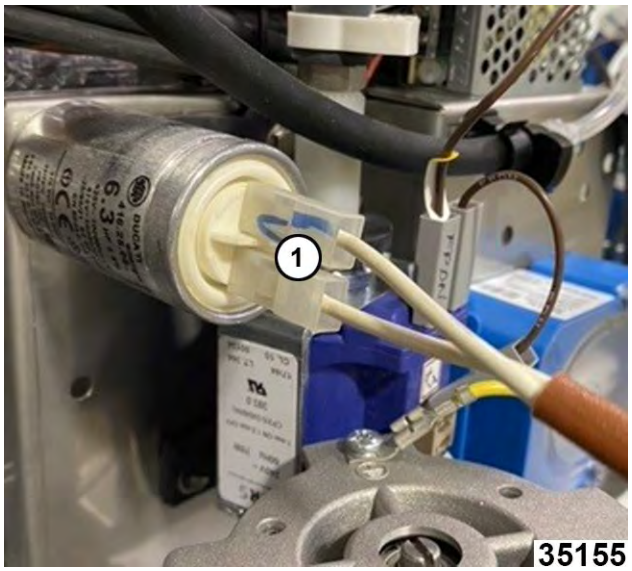


Fig. 33

3. Remove capacitor mounting nut behind bracket.

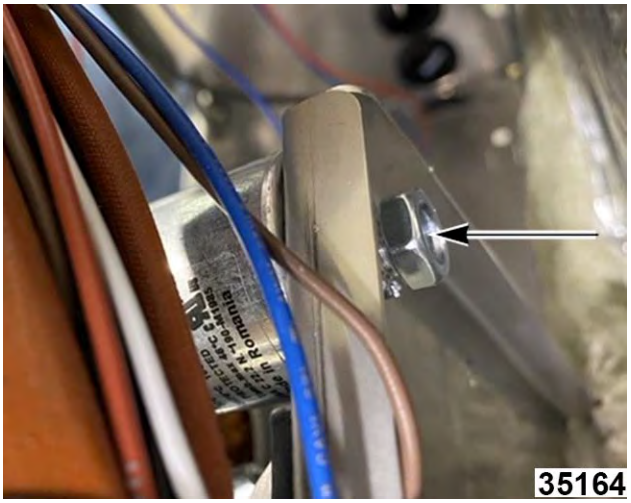


Fig. 34

4. Reverse procedure to install.

DOOR

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect LED strip wiring from power supply.

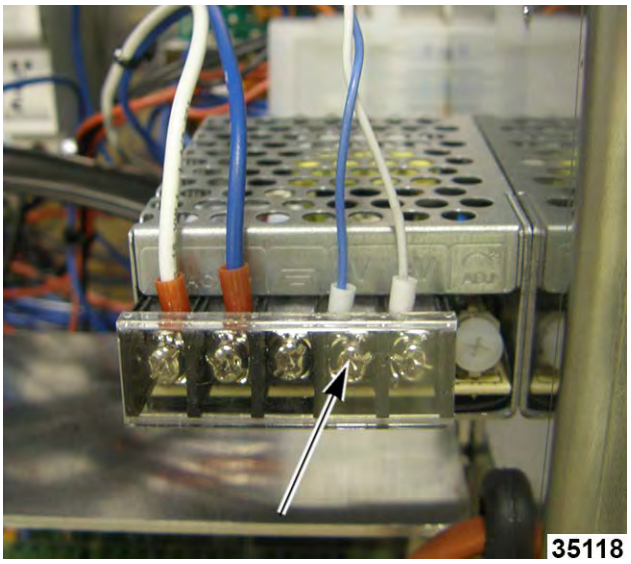


Fig. 35

3. Remove INTERNAL GLASS DOOR.
4. Remove hinge cover mounting screw and bolts.

Fig. 36

5. Note and disconnect power supply LED wiring (1, Fig. 37) from hinge.

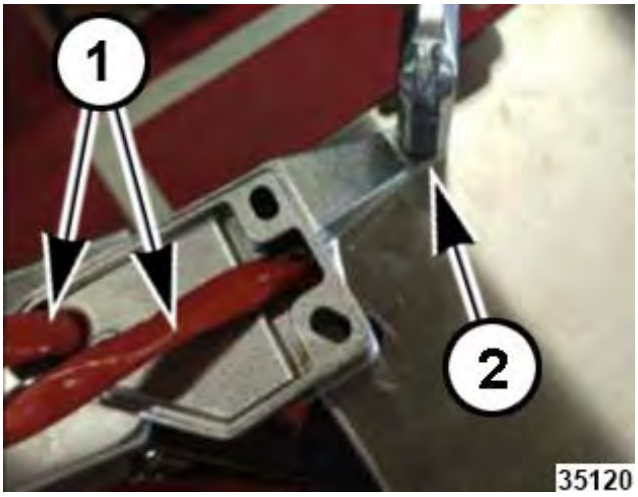


Fig. 37

6. Loosen hinge mounting screw (2, Fig. 37).
7. Lift door to remove from lower hinge, then release from top hinge.
8. Reverse procedure to install.

NOTE: Reuse brass spacers with new door.

NOTICE

Verify hinge cover is seated correctly.

9. Level door as needed.
   A. Loosen hinge screws.
   B. Position a level on top of door.
   C. Lift door to level it and tighten screws.

DOOR (LED STRIP)

⚠ WARNING

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

1. Remove DOOR PANEL.
2. Remove inner panel mouting bracket. (Fig. 38)

Fig. 38

3. Unscrew LED strip.

Fig. 39

4. Locate wiring connector (1, Fig. 40). Mark wires.

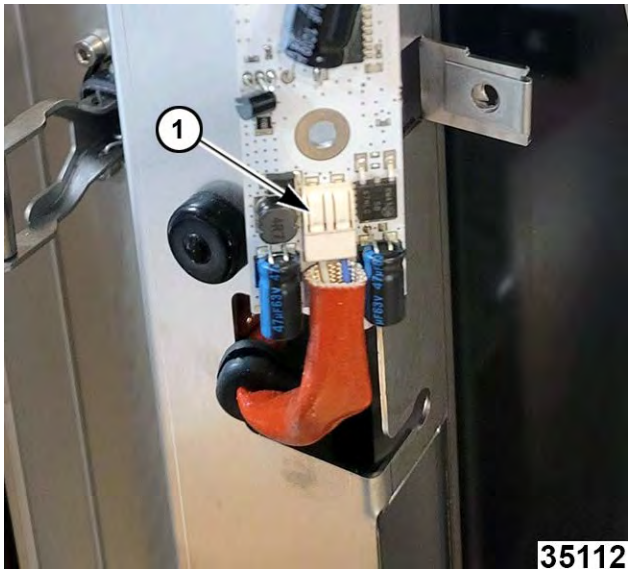


Fig. 40

5. Push on tab (1, Fig. 40) to disconnect wires (2, Fig. 40).

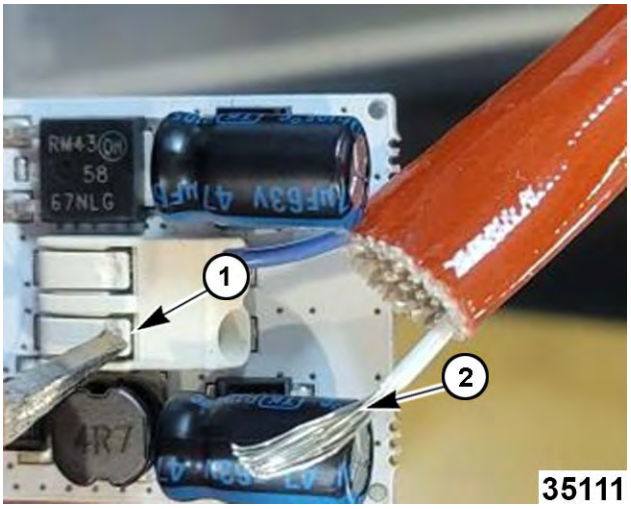


Fig. 41

6. Reverse procedure to install.

DOOR HANDLE AND LATCH

1. Remove DOOR PANEL.
2. Remove inner panel mounting bracket.

Fig. 42

3. Remove handle mounting screws.

NOTE: Door handle mounting screws use a star bit screwdriver.

Fig. 43

4. Unscrew latch mechanism (1, Fig. 45) from door handle (2, Fig. 45).

Fig. 44

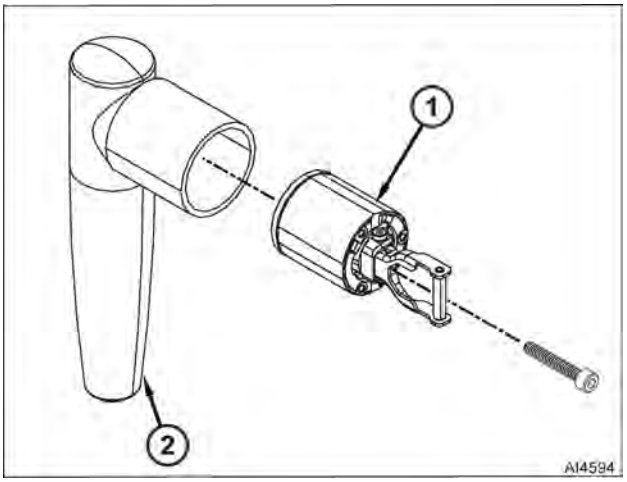


Fig. 45

5. Reverse procedure to install.

DOOR CATCH

1. Open door.
2. Remove door catch mounting screws.

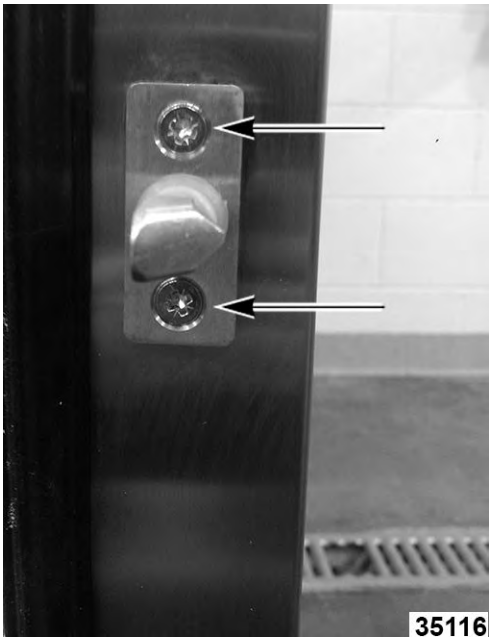


Fig. 46

3. Remove catch and shims (1, Fig. 47).

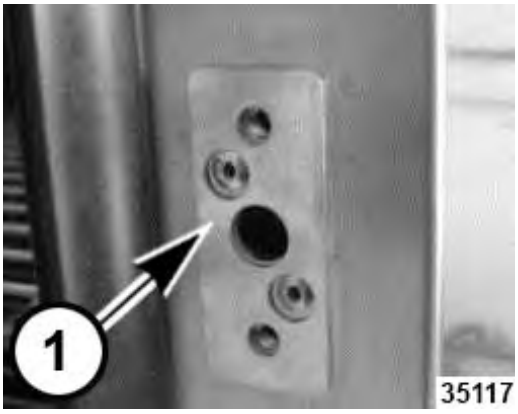


Fig. 47

4. Reverse procedure to install.

INTERNAL GLASS DOOR

1. Open door.
2. Locate upper and lower glass door mounting brackets.

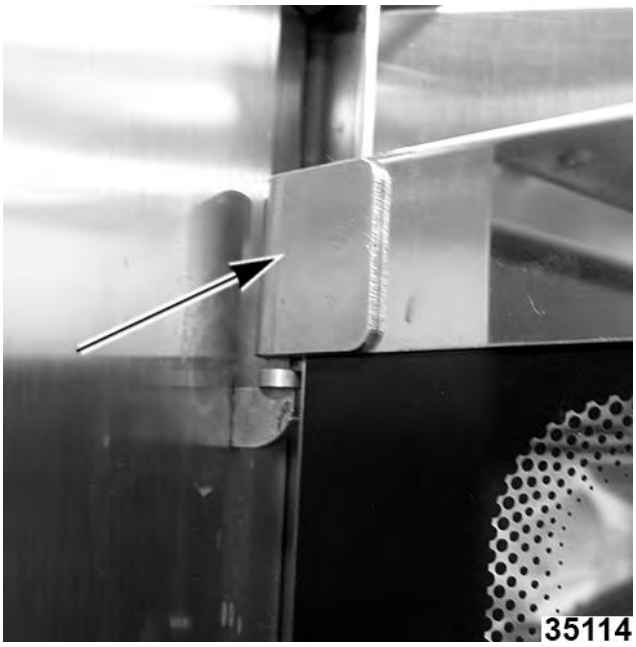


Fig. 48

3. Lift door (2, Fig. 49) off mounting pins (2, Fig. 49) on top and bottom. Verify brass spacers (3, Fig. 49) remains on pins.

Fig. 49

VENT MOTOR

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect vent motor wiring.

Fig. 50

3. Loosen motor mount bolt (1, Fig. 51).

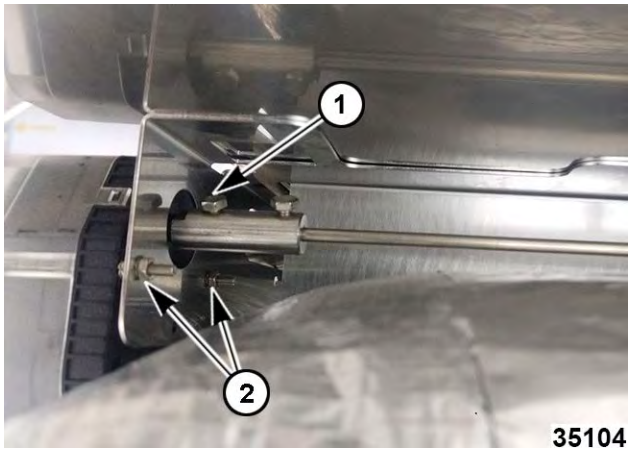


Fig. 51

4. Remove both mounting nuts (2, Fig. 51).
5. Reverse procedure to install.

FLOW METER

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Remove electrical supply (1, Fig. 52) to flow meter.

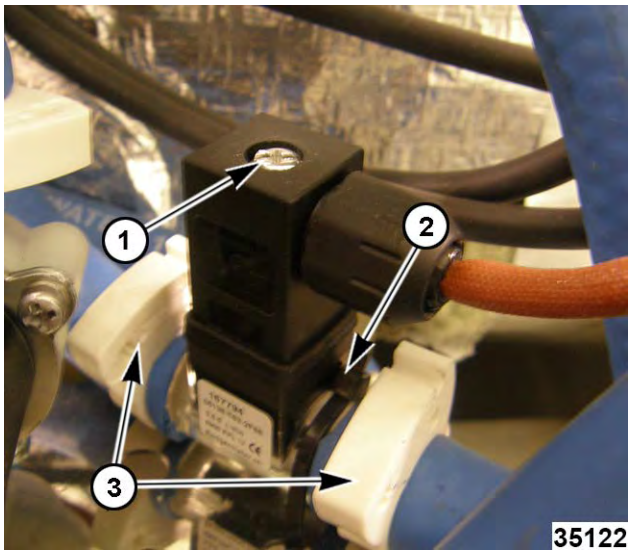


Fig. 52

3. Remove cable tie (2, Fig. 52).
4. Disconnect clamps (3, Fig. 52).
5. Reverse procedure to install.

DETERGENT PUMP

⚠ WARNING

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

⚠ WARNING

Remember the dangers identified on the safety data sheet for detergent:

- Harmful if swallowed.
- Avoid direct contact with these products.
- Can result in serious burns.
- Wear protective clothing, gloves, and hermetic protective goggles in accordance with the safety data sheet.
- Detergent will cause irritation and possible burns if in direct contact with the skin or eyes.
- Irritates the respiratory tracts.
- Risk of serious eye lesions.
- Do not inhale the mist or spray.
- Irritates the eyes.
- If case of contact with eyes rinse immediately with plenty of water and seek medical advice.
- Danger of eye and skin irritation or acid burns.
- In the event of an accident or sickness seek immediate medical attention.
- Dispose of the product and its container as hazardous waste.

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect electrical wires from detergent pump.
3. Shut off filtered and unfiltered water supplies.
4. Disconnect hose clamps (1, Fig. 53) from detergent pump.

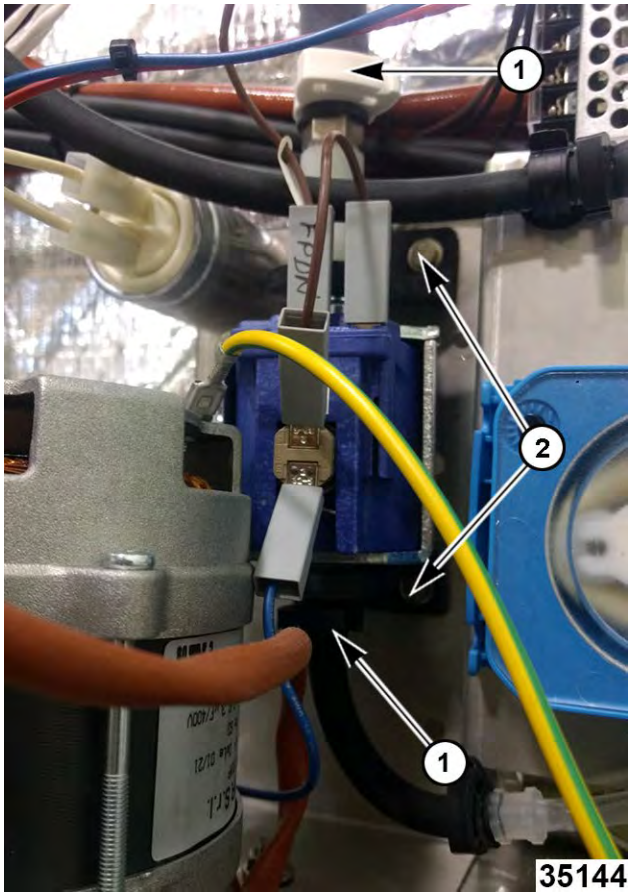


Fig. 53

5. Remove FLOW METER.
6. Remove screws, washers,(2, Fig. 53) and detergent pump from mounting bracket.
7. Reverse procedure to install.

TEMPERATURE PROBE

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect temperature probe wiring.

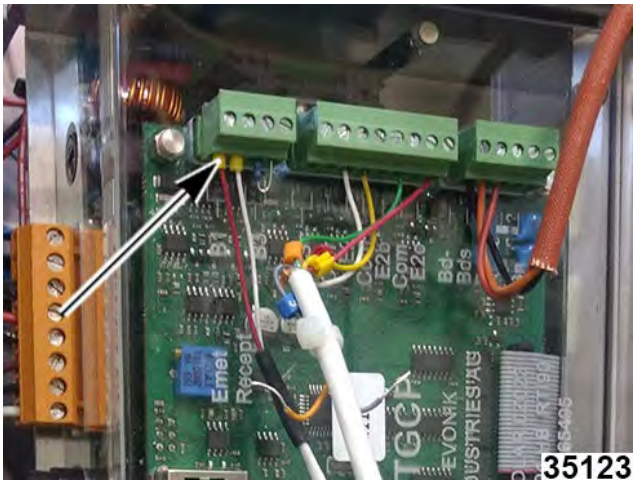


Fig. 54

3. Remove holding clip (1, Fig. 55), probe and seal.

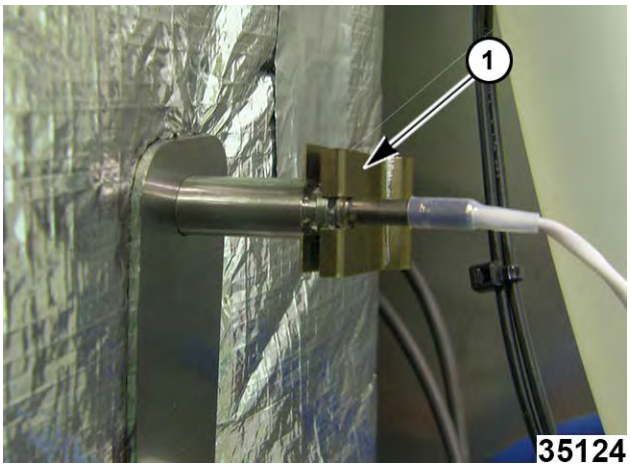


Fig. 55

4. Reverse procedure to install.

NOTICE

The probe seal must always be changed if the probe is changed or removed for any reason (replaced or simply checked).

DESCALE / RINSE AID PUMP INTERNAL HOSE

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Remove cover mounting screws.

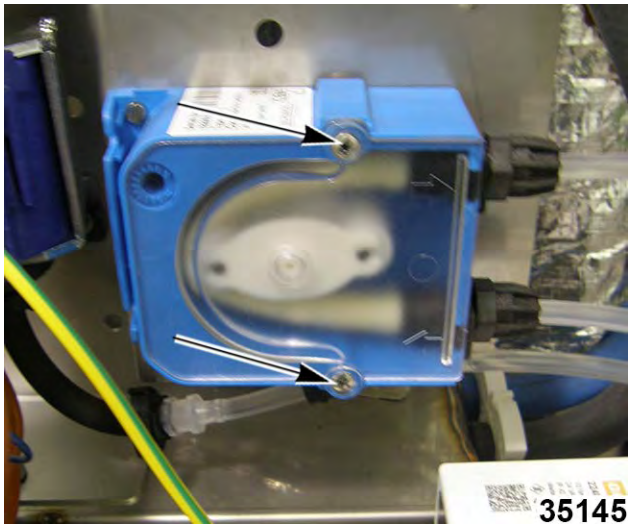


Fig. 56

3. Clamp inlet and outlet hose.
4. Remove hose from pump and disconnect nuts (1, Fig. 57).

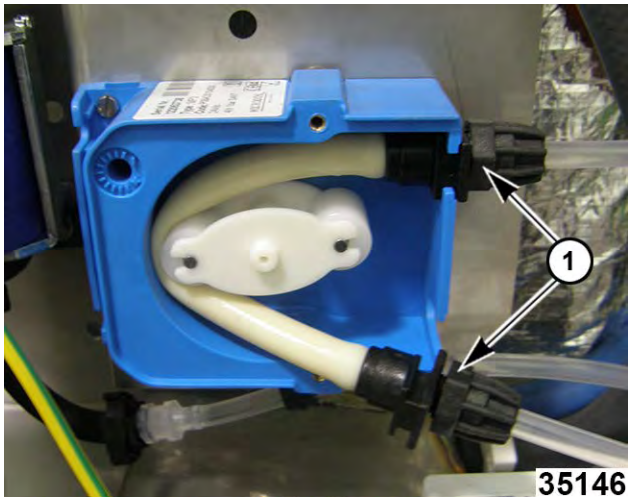


Fig. 57

5. Disconnect inlet and outlet hoses.
6. Reverse procedure to install.

DRAIN VALVE MOTOR

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect valve motor wiring.

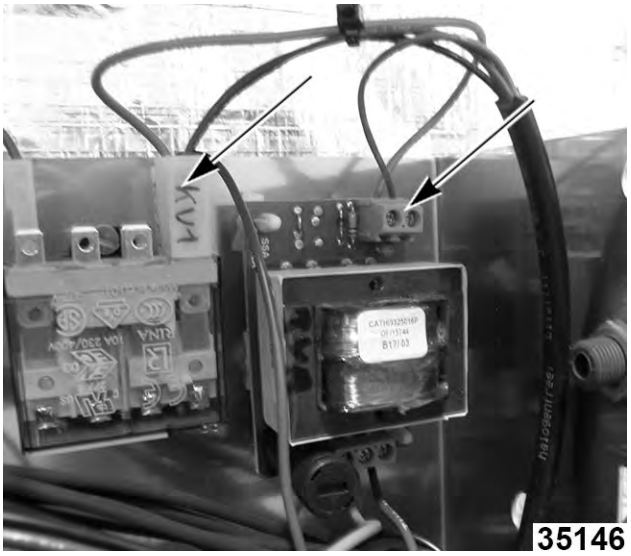


Fig. 58

3. Remove valve motor cover mounting screw and lift motor off valve.

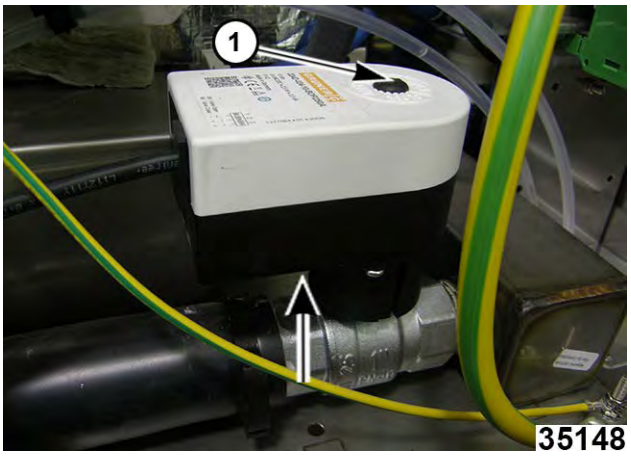


Fig. 59

4. Reverse procedure to install.

CAVITY FAN MOTOR

⚠ WARNING

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

1. Remove FAN.
2. Remove MOTOR SHAFT SEAL.
3. Remove RIGHT SIDE PANEL.
4. Remove BACK PANEL.
5. Note and disconnect motor wiring.
6. Remove motor mounting screws and washers.

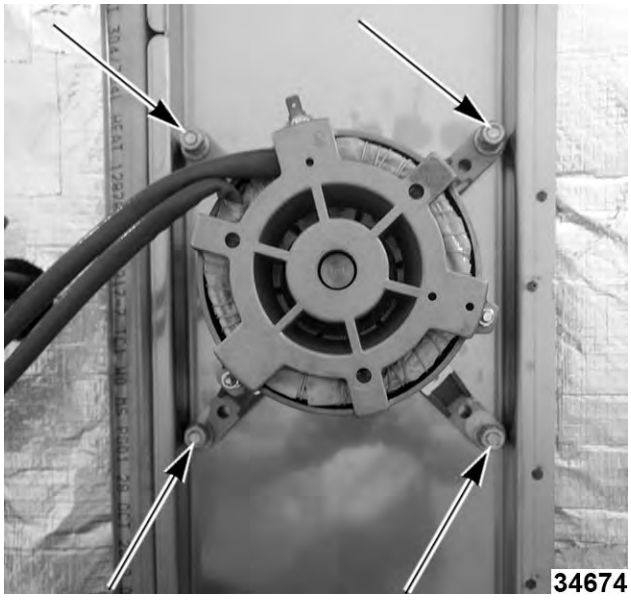


Fig. 60

7. Carefully pull motor downwards and out to remove.
8. Reverse procedure to install.

MOTOR SHAFT SEAL

⚠ WARNING

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

1. Open door.
2. Remove shaft seal and wear ring.

Fig. 61

NOTICE

Wear ring (1, Fig. 62) should also be replaced when changing shaft seal (2, Fig. 62).

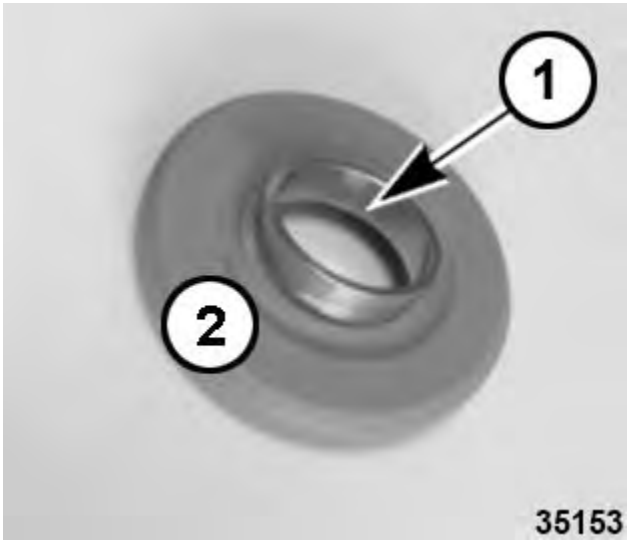


Fig. 62

3. Lubricate motor shaft with high temperature food quality grease. (Example: BIOLUB)
4. Rotate assembly on motor shaft before fitting onto fan.

NOTICE

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

5. Verify proper operation.

DOOR SEAL

1. Open door.
2. Pinch door seal (1, Fig. 63) in each corner and pull out.

Fig. 63

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

COMBUSTION BLOWER

⚠ 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 RIGHT SIDE PANEL.
2. Disconnect gas lines (1, Fig. 64).

NOTICE

Note stack up location of gasket and injector for reassembly which are located between blower and gas line.

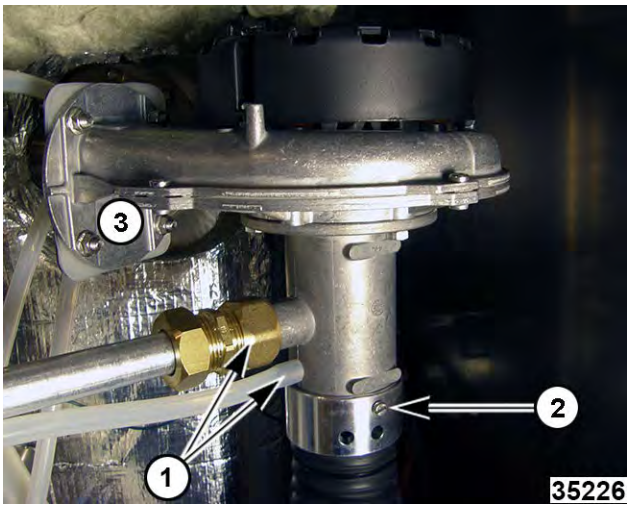


Fig. 64

3. Remove hose mounting screw (2, Fig. 64) on adapter to disconnect.
4. Remove mounting nuts (3, Fig. 64) to gas exchanger.
5. Reverse procedure to install.

GAS VALVE

⚠ 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 RIGHT SIDE PANEL.
2. Note and disconnect gas lines from gas valve (1, Fig. 65).

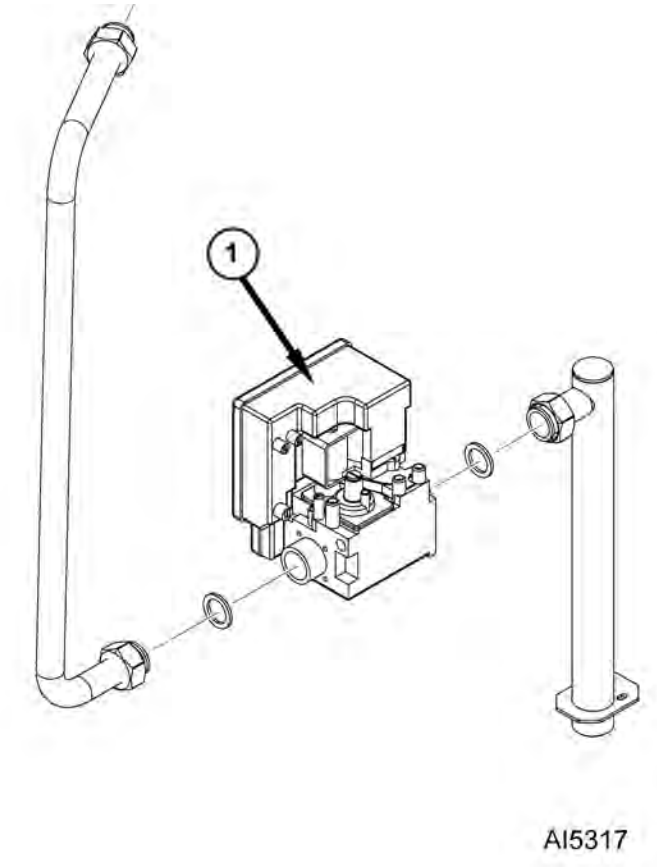


Fig. 65

3. Reverse procedure to install.
4. ADJUST GAS VALVE as needed.
5. Confirm GAS SUPPLY PRESSURE and CO2 RATE.

GAS TRANSFORMER

⚠ WARNING

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

1. Remove RIGHT SIDE PANEL.
2. Note and disconnect transformer wiring.
3. Disconnect transformer wire harness (1, Fig. 66).

   TCM102 Model Shown in Fig. 66 and Fig. 67

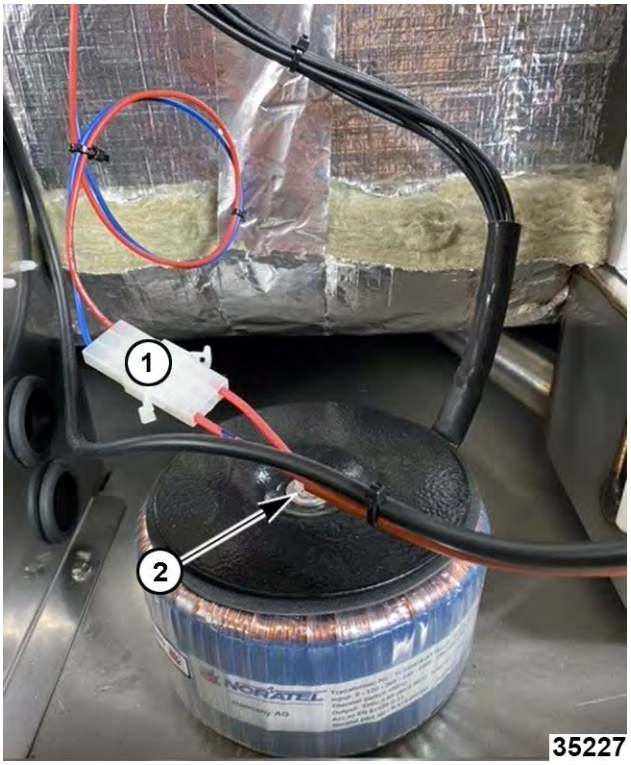


Fig. 66

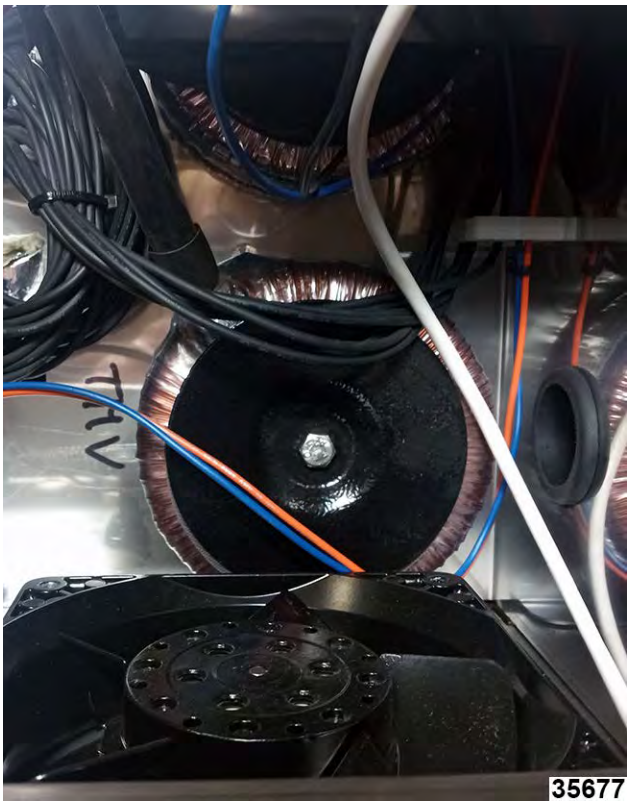


Fig. 67

4. Remove transformer mounting screw (2, Fig. 66).
5. Reverse procedure to install.

WIRING / FLUID DIAGRAMS

DIAGRAMS

NOTICE

The 2 Amp fuse is replaced by the 4 Amp fuse. Serial Number start was P27531455J (03/11/2021) and ending at P27532824J (01/20/2022).

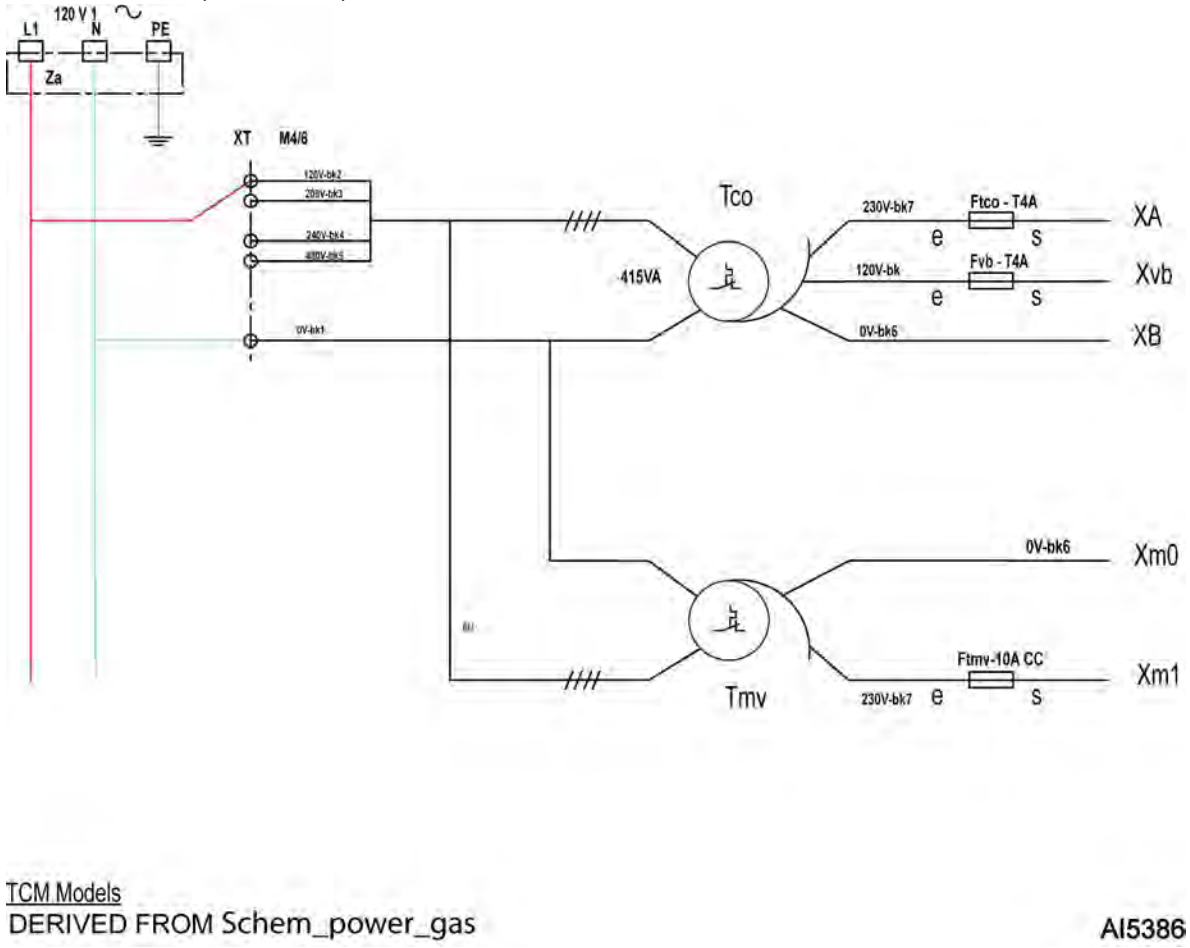
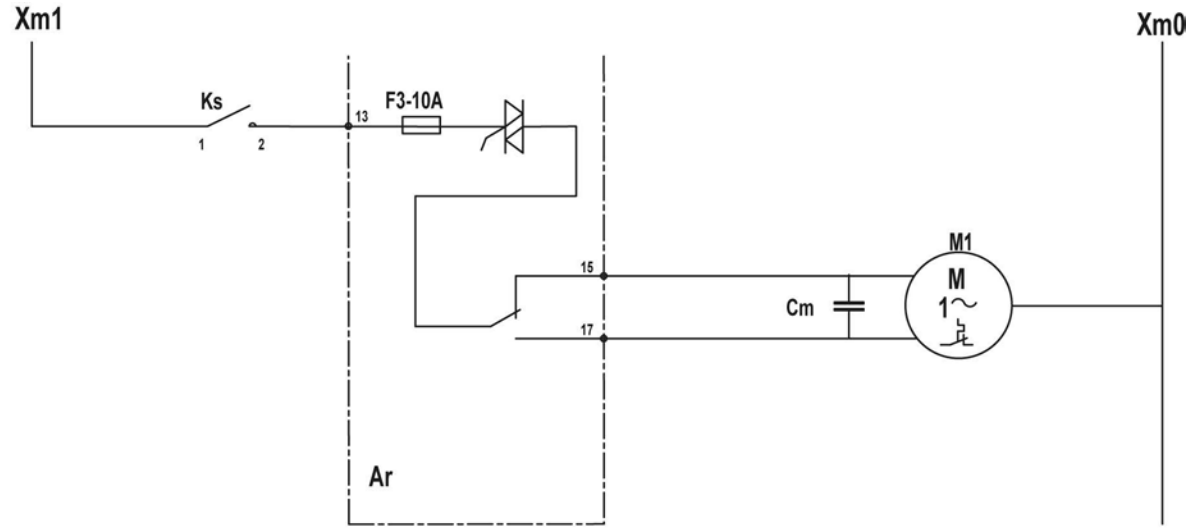


Fig. 68



TCM Models

DERIVED FROM Schem_Vent_Moufle AI5385

Fig. 69

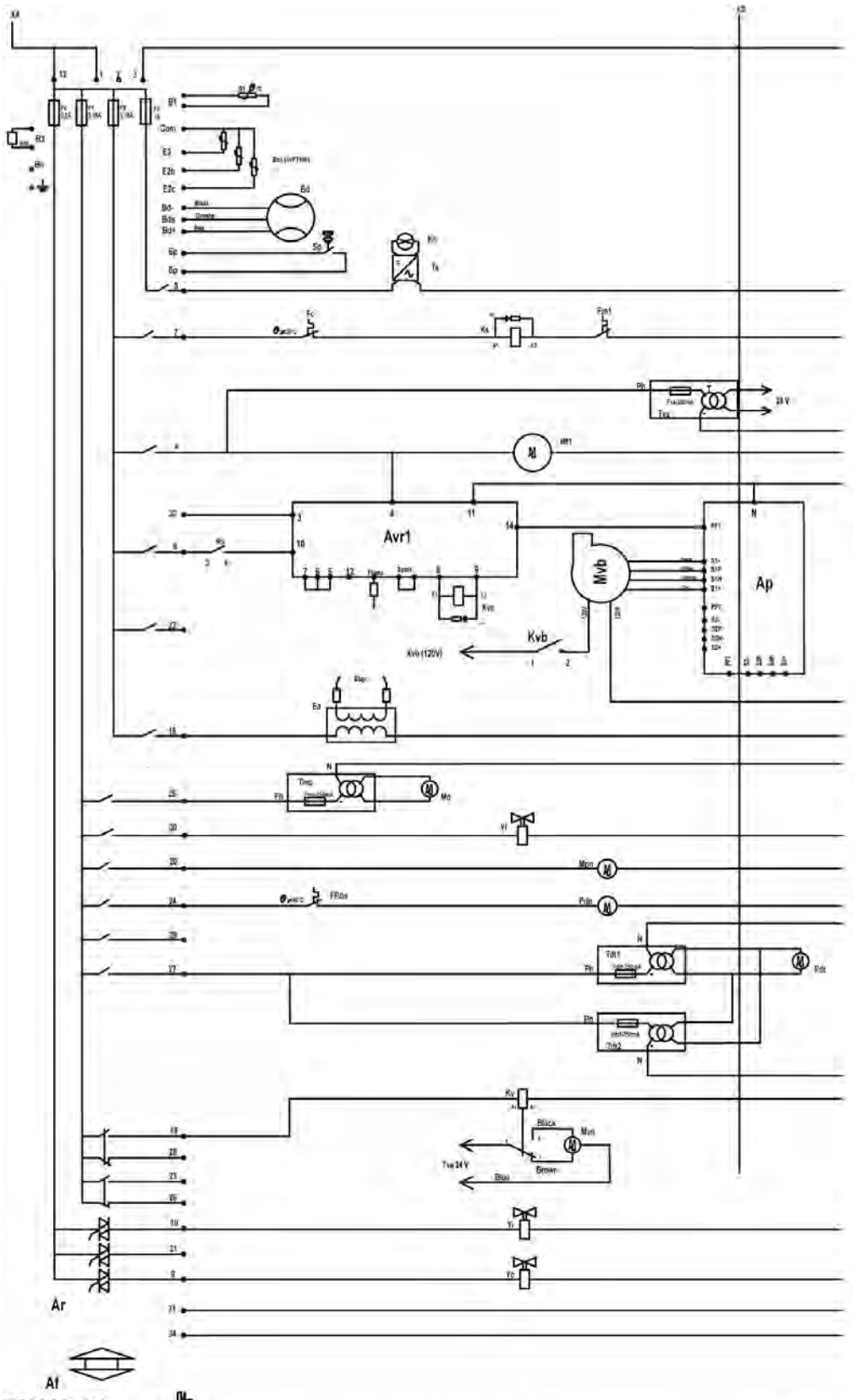
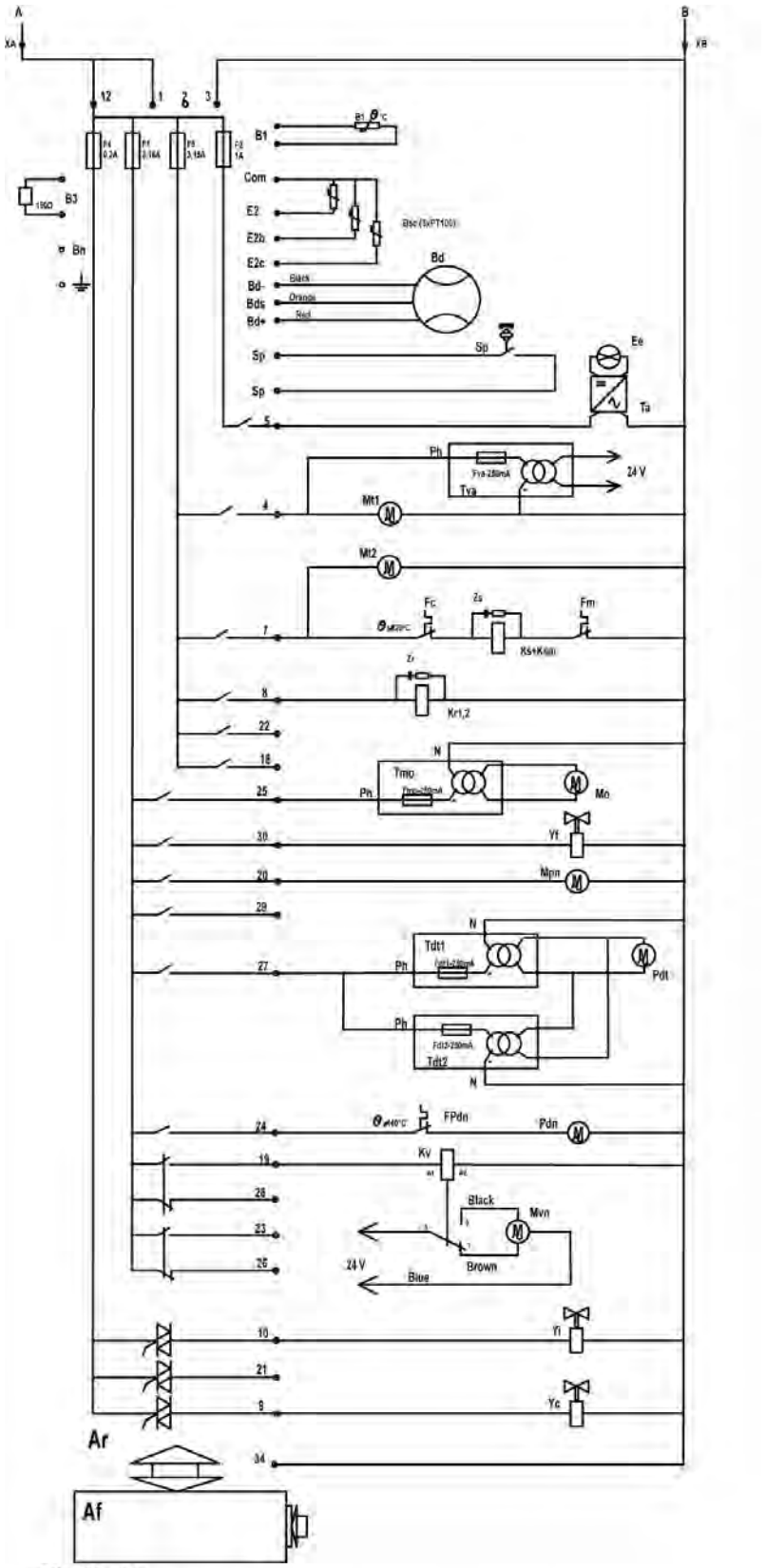

Avr1
Ap
Mvb
Kvb
Kvb (120V)
Ar
Af
TCM Models
DERIVED FROM Gas_Schéma de commande PRECIJET
AI5387

Fig. 70



TCM Models
DERIVED FROM
Electric_Schematic_Power_Commande_Precijet AI5388

Fig. 71

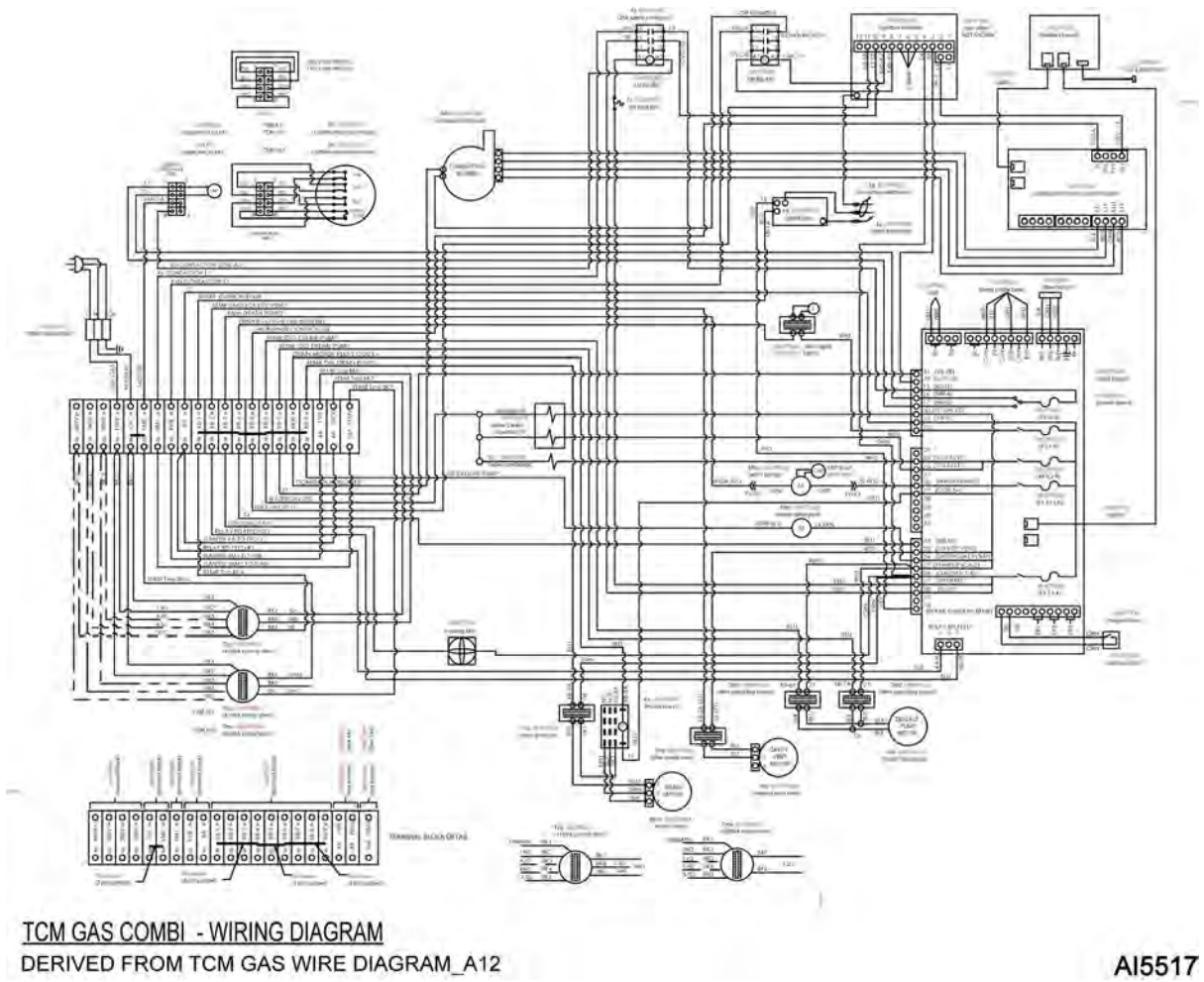


Fig. 72

Large TCM Gas Combi Wire Diagram Link

FLUID DIAGRAMS

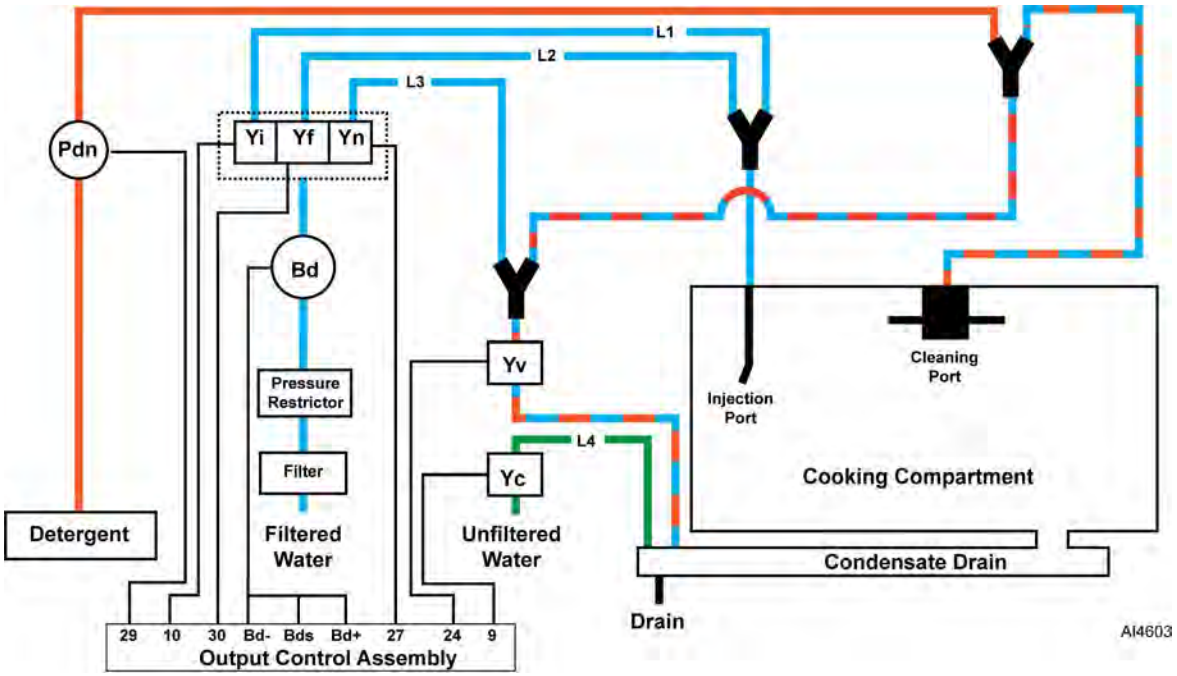
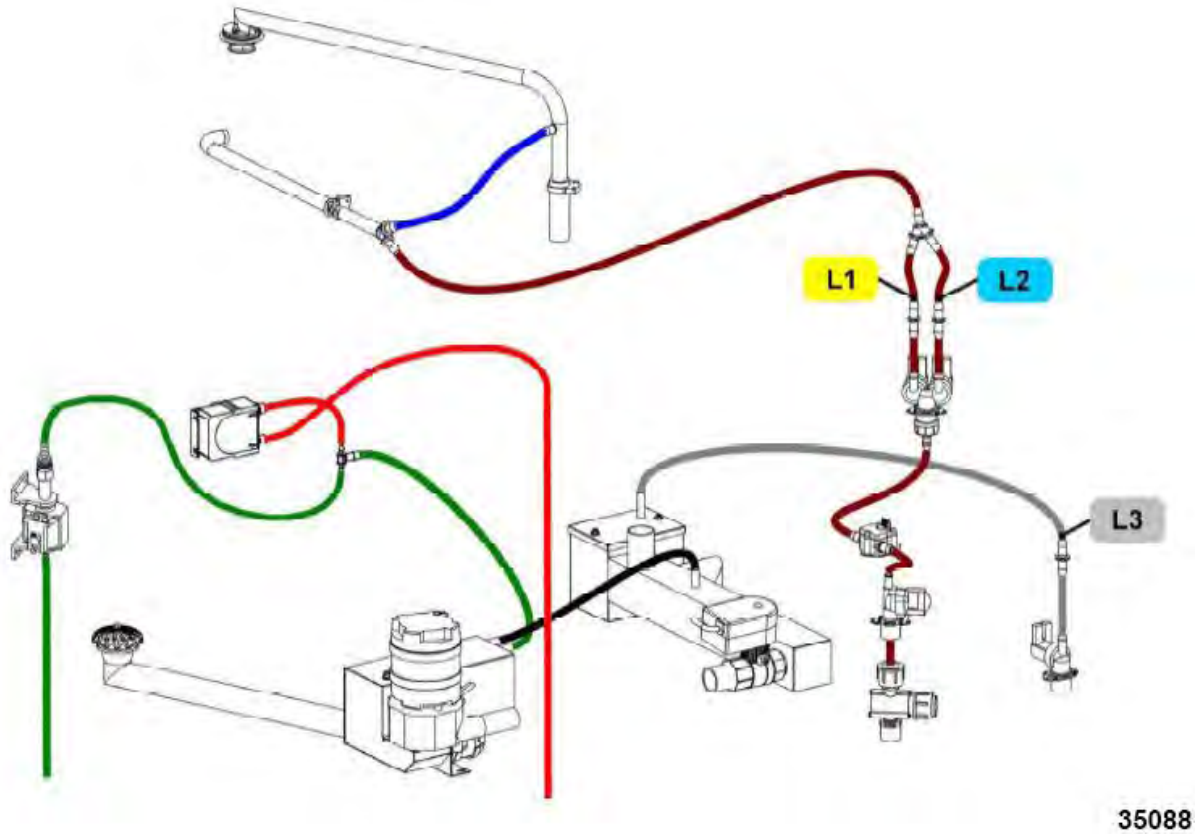


Fig. 73

Reference Designator	Nomenclature
Bd	Flow Meter
Pdn	Detergent Pump
Yc	Condensate Cooling Valve Solenoid
Yf	Cooling Valve Solenoid
Yi	Injection Valve Solenoid
Yn	Cleaning Valve Solenoid
Yv	Detergent Supply Valve Solenoid

Operation	Yi	Yf	Yn	Yv	Yc	Pump
Injection	Open (L1 Flow @ 8.5 Oz / Min)	CLOSED (No Flow)	CLOSED (No Flow)	CLOSED (No Flow)	CLOSED (No Flow)	Inactive
Cooling	CLOSED (No Flow)	OPEN (L2 flow @ 17 Oz / Min)	CLOSED (No Flow)	CLOSED (No Flow)	CLOSED (No Flow)	Inactive
Cleaning	CLOSED (No Flow)	CLOSED (No Flow)	OPEN (L3 Flow @ 169 Oz / Min)	CLOSED (No Flow)	CLOSED (No Flow)	Active
Drain	CLOSED (No Flow)	CLOSED (No Flow)	CLOSED (No Flow)	OPEN (Gravity Flow)	OPEN (L4 Flow @ 27 Oz / min	Inactive



6 AND 10 LEVEL OVENS

Flow Restrictors		6 Level 1/1 Electric	6 Level 1/1 Gas	10 Level 1/1 Electric	10 Level 1/1 Gas	10 Level 2/1 Electric	10 Level 2/1 Gas
Injection	L1	0.25 l/min	0.25 l/min	0.5 l/min	0.5 l/min	0.8 l/min	0.8 l/min
Cooling	L2	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min
Condenser	L3	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min	1.2 l/min

SERVICE PROCEDURES AND ADJUSTMENTS

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.

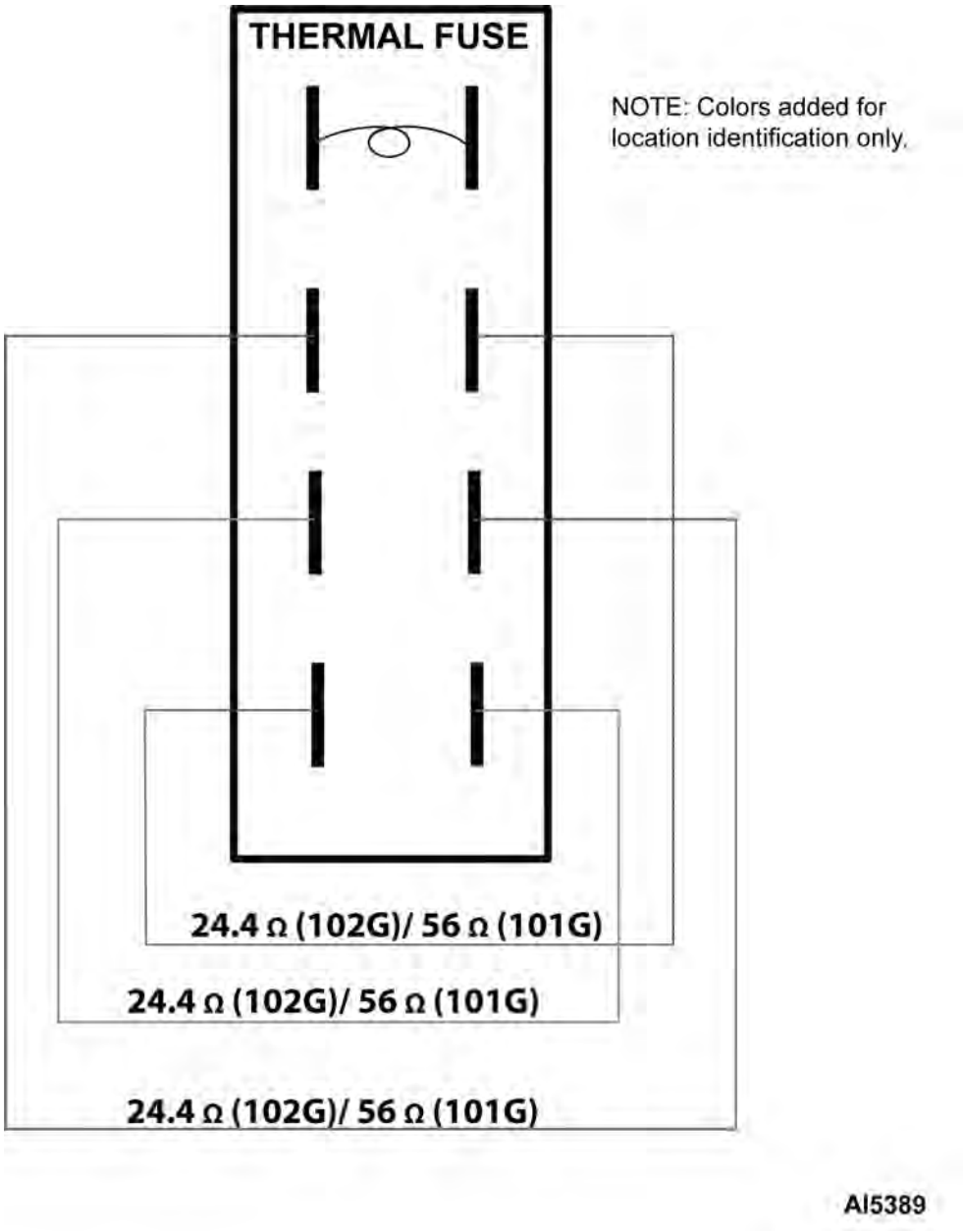


Fig. 75

SOLENOID VALVES

⚠ WARNING

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

1. Disconnect supply power.
2. Remove BACK PANEL.
3. Locate solenoid to check.
   - Access Yi (1, Fig. 76), Yf (2, Fig. 77) and Yc (3, Fig. 78).
   - Verify readings in below.

Connection	Reading
Yf	4307 ohms
Yi	4338 ohms
Yc	4338 ohms

Yi

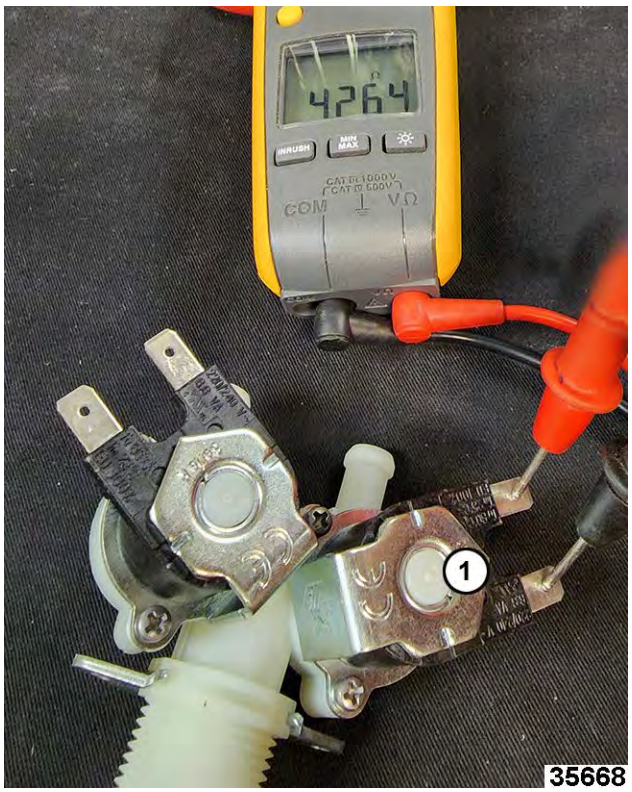


Fig. 76

Yf

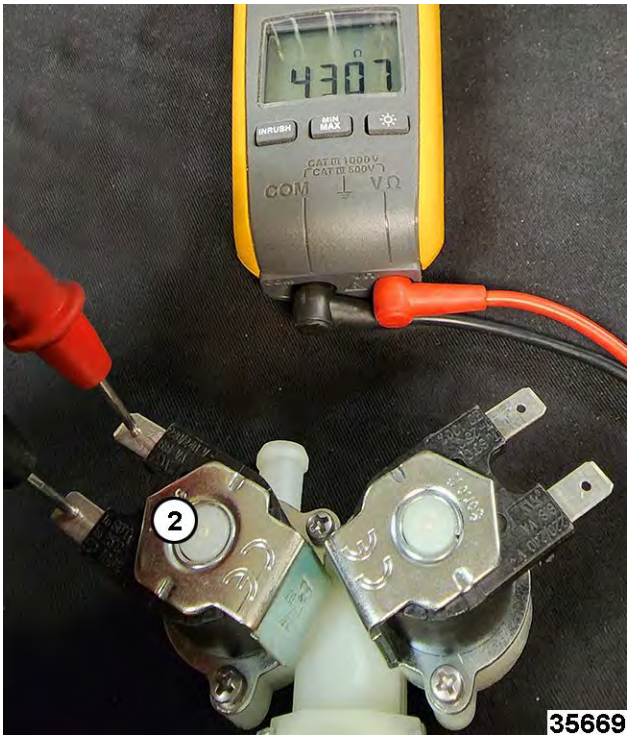


Fig. 77

Yc

Fig. 78

CHANGE TYPE OF GAS SUPPLY

⚠ 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.

⚠ WARNING

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

1. Verify which gas is presently used in facility.
2. Configure oven software for new gas.
   A. Turn on oven and turn on control screen without heating.
   B. Select "TOOL BOX" menu.
   C. Select "Technician parameters" screen and Enter the password: « SAVB »
   D. Validate "V".

      NOTE: When finished, if the code is correct, access the menu and do not re-enter PIN number.
3. Change gas type.
   A. Select zone of value to be changed.
   B. Adjust gas type with the coder knob (Gas A (Natural) or Gas 31 (Propane).
   C. Validate value.
   D. Turn oven off and on. Verfiy settings have been saved.

Fig. 79

4. Change orifice for new gas. Refer to: ORIFICE.
5. Install oven to gas pipe.
   A. Install shut-off valve between gas pipe to oven.
   B. Check connections for leaks.
   C. Perform pressure test point on gas valve supply side.
      1) Loosen pressure screw by 2 to 3 turns and open gas valve.
      2) Connect manometer to pressure outlet and close gas valve.
      3) Check water column level for 1 minute.

         NOTICE

         Reading should be unchanged at -1mbar.
6. Check pressure.
   A. Static pressure.
      1) Control pressure using water column.
      2) Measurement taken must be equal to or grater than correct pressure for gas type.
   B. Connection pressure/dynamic (oven in operation).
      1) Connect manometer to pressure tap with burners on and operating (oven heating).
      2) Gas pressure recorded must be within correct range for this gas type.

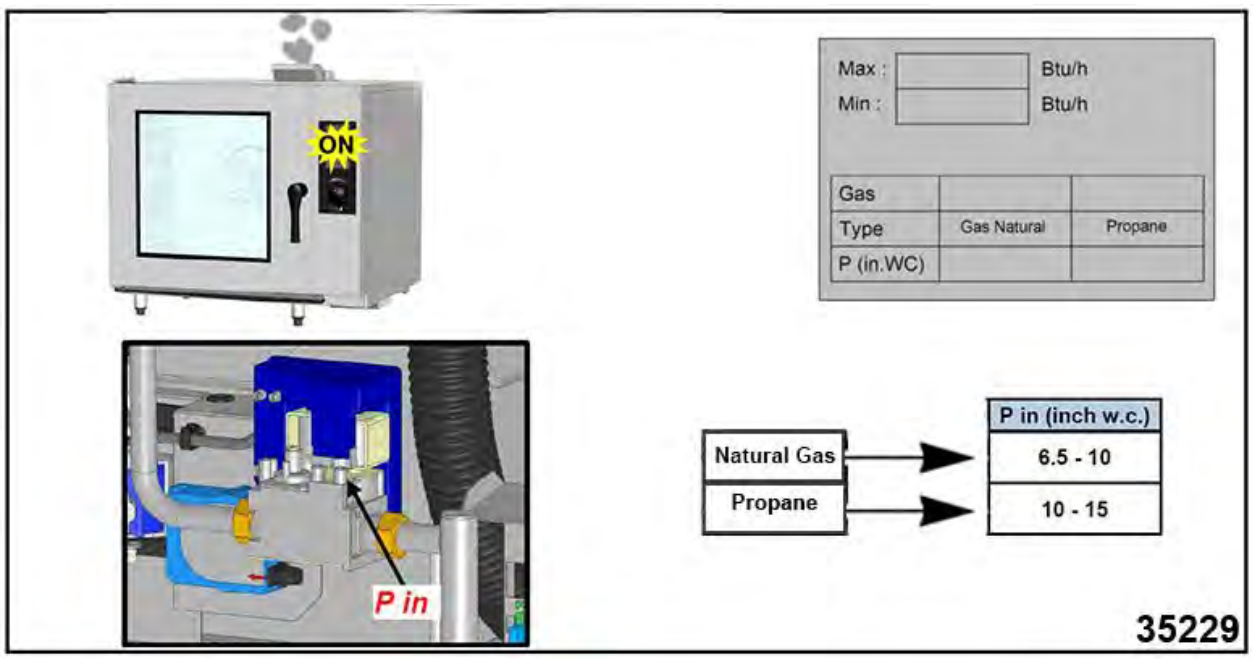


Fig. 80

7. Perform combustion analysis and if necessary, adjust CO2 screw on gas valve.

   NOTE: Evacuation of combustion gases must comply with local codes.
   A. Set combustion analyzer to show CO2 rate in %.
   B. Place probe in the oven chimney.

Fig. 81

C. Set switch SW1 to ON.

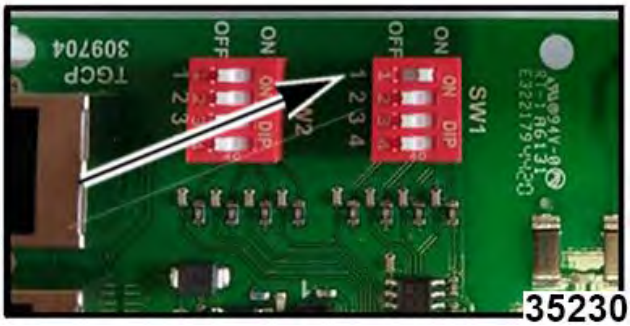


Fig. 82

D. Turn oven on.

1) Set oven to dry mode.
2) Set temperature to 482°F (250°C)
3) Press start.

E. Check CO2.

NOTE: The percentage of CO2 measured must correspond to required value within +/- 0.2% for the gas type.

- Natural Gas - 11.1%
- Propane - 11.4%

8. Adjust CO if nessessary. Refer to: ADJUST GAS VALVE.
9. Place new gas plate on oven with corresponding gas.

ORIFICE

NOTE: Different gases are designated by their international codification.

- Gas A - Natural Gas
- Gas E - Propane (G31)

GAS			ORIFICES		
Designation		Pressure	Qty	1/100th mm	Code
Family	Type	(mbar) / (inch w.c.)			

GAS			ORIFICES		
Natural	A	16 - 25 / 6.5 - 10	1	580	148 798
Propane	E (G31)	25 - 38 / 10 - 15	1	390	148 799

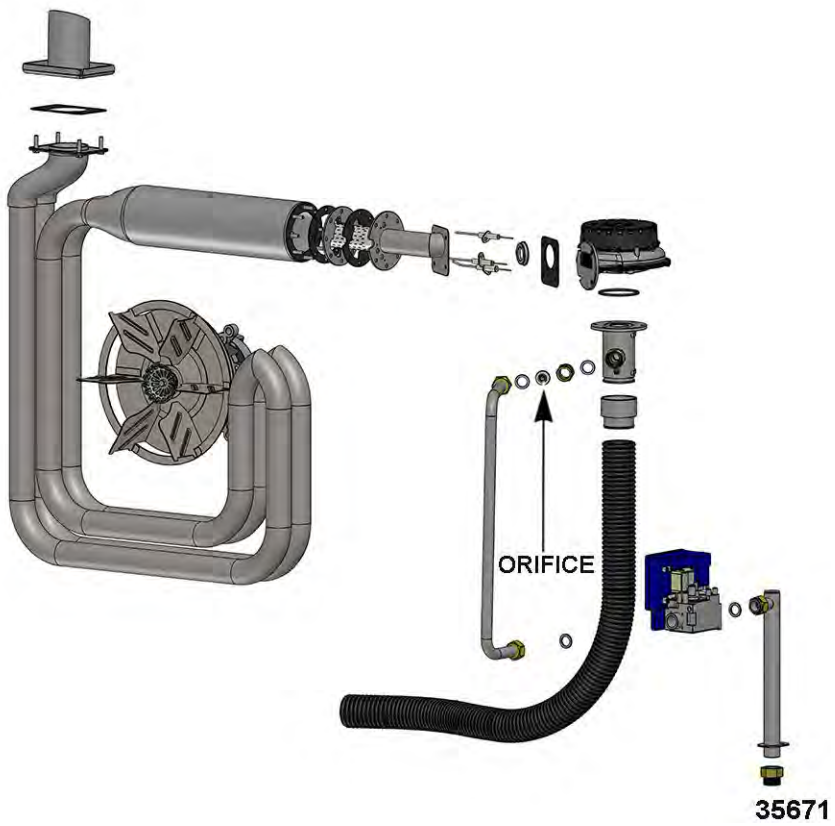


Fig. 83

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 + OR – 0.5mm. It will be modified further when adjusting the combustion.

1. Remove RIGHT SIDE PANEL.
2. Remove protective cap from adjustment screw.
3. Adjust setting tightening/loosening the screw (1, Fig. 84) a maximum of a quarter turn at a time.

Fig. 84

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

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

   A. Set combustion analyzer to show CO2 rate in %.

   B. Place probe in oven chimney.

Fig. 85

C. Set switch SW1, **1** on **ON**.

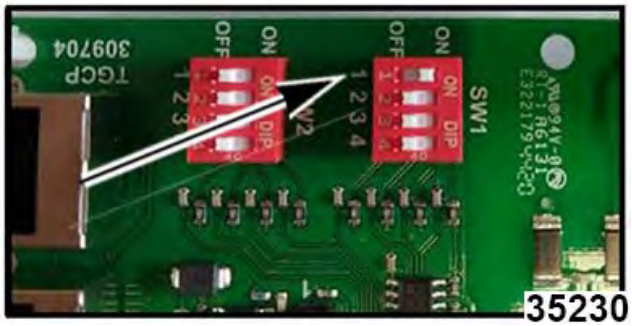


Fig. 86

D. Turn oven on.

1) Set oven to dry mode.

2) Set temperature to **482°F** (250°C).

3) Press start.

E. Check CO2.

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

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

7. Move SW1 switch back to operating mode, **1 back to OFF (1 Fig. 87)**.

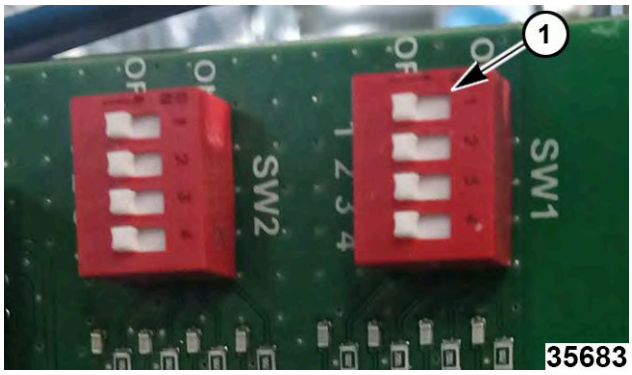


Fig. 87

8. Verify CO2 rate is less than 150ppm.

VALUES		
Type	L (mm)	L (Inch)
Natural Gas	4	0.15
Propane	4	0.15

NOTE: Other Models 61G and I01G unit valve is set to 7.26 mm and .286" this is equal to 2 turns up after bottoming out the adjusting screw. This is equal to 5 turns up after bottoming out the adjusting screw. 102G is showing 3mm and 1/8" setting this is equal to 10-10 1/2 turns up after bottoming out the adjusting screw. Gas pressure and CO2 rate would need to be confirmed after adjustments are made for any slight adjustments that may be needed.

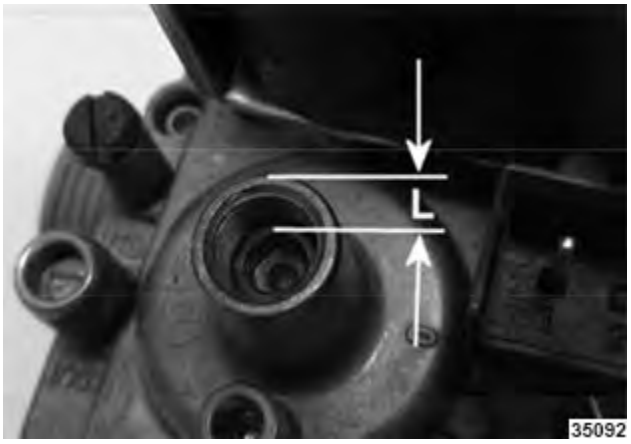


Fig. 88

ELECTRODES (GAS BURNER)

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.
- Rod / gauge by 3mm and 4mm diameters for ignition electrodes.

1. Remove burner.
2. Take a photo to verify position of ignition electrodes.
3. Measure dimensions as shown in Fig. 89 and Fig. 90.

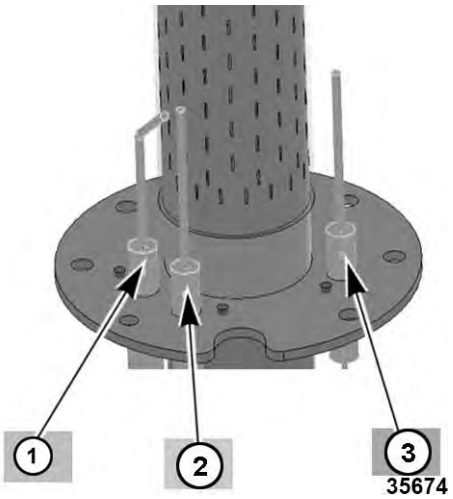


Fig. 89

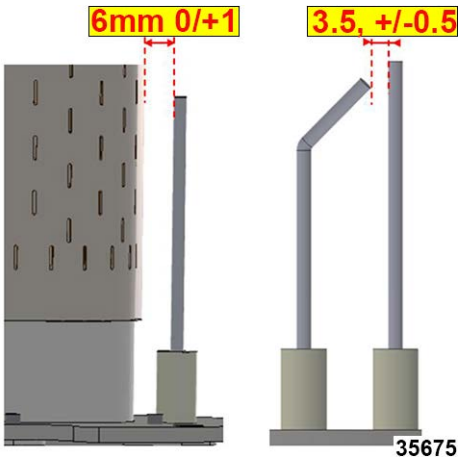


Fig. 90

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.

GAS VALVE RESISTANCE

⚠ 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 GAS VALVE through RIGHT SIDE PANEL.
2. Remove cover on gas valve (1 & 2, Fig. 91).

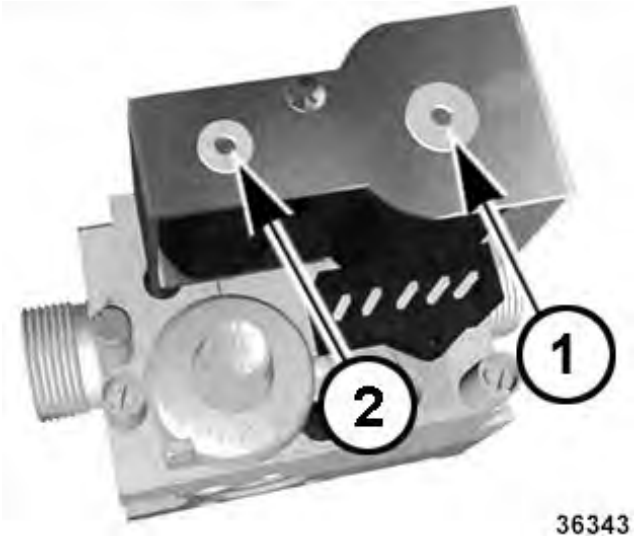


Fig. 91

3. Check resistance.
   - ≈0.6KΩ for EV1
   - ≈3994Ω for EV2

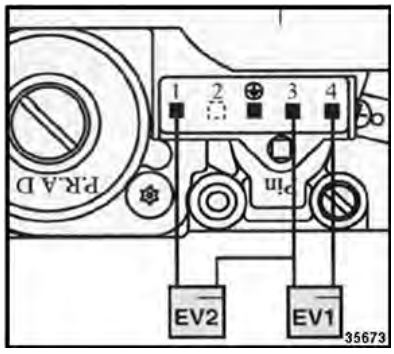


Fig. 92

ELECTRICAL OPERATION

GAS COMPONENTS

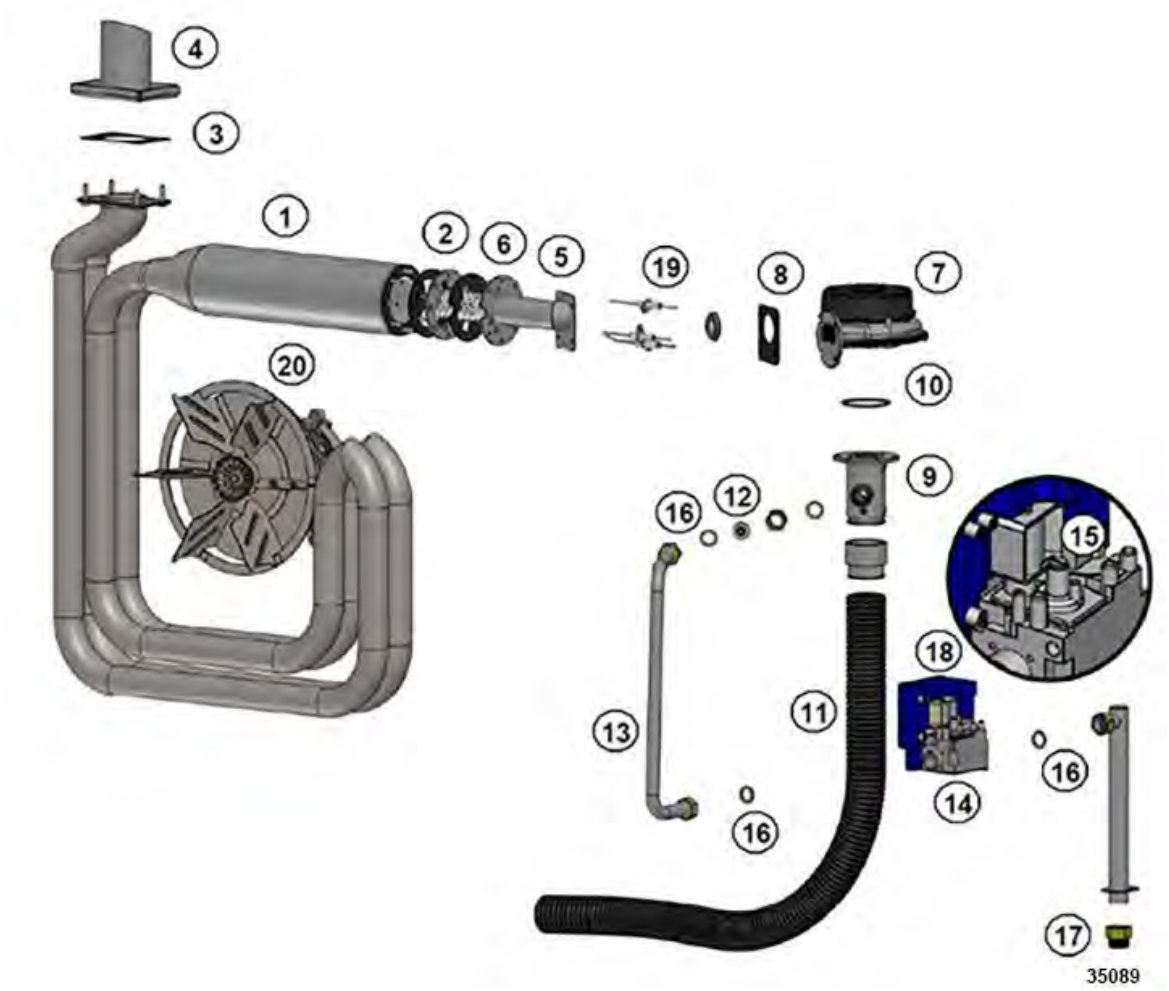


Fig. 93

Number	Description
1	Gas Exchanger
2	Gas Exhanager Inlet Gasket
3	Gas Exhanager Outlet Gasket
4	Flue Gas Evacuation Chimney
5	Gas Burner
6	Gas Burner Gasket
7	Gas Fan
8	Gas Fan Gasket
9	Venturi
10	Venturi Gasket
11	Air Inlet Hose

Number	Description
12	Gas Orifice
13	Gas Piping
14	Gas Valve
15	C02 Screw
16	20/27 Gas Valve Gasket
17	3/4" NPT Gas Inlet Adapter Note: Propane Orifice zip tied to inlet pipe inside machine.
18	Ignition Module
19	Ignition Electrodes
20	Turbine

COMPONENT FUNCTION

Axial Fans (Mt1 and Mt2) . . . . . . Provides cooling air flow to oven electronics.

Blower Motor (M1) . . . . Used to rotate blower fan inside of oven cavity. The motor has an internal thermal protection device (Fm1) that opens if the motor overheats. It is self-resetting once the motor cools.

Capacitor (Cm1) . . . . . . Provides starting boost to blower motor.

Cavity Temperature Sensor (B1) . . . . . . RTD style monitors the oven cavity temperature and provides an input to the output control assembly.

Cleaning Port . . . . . . Supplies detergent / water to clean cooking compartment.

Contactor (Kr) . . . . . . Heat control contactor. Supplies power to heating elements as long as contactor Ks is closed.

Contactor (Ks) . . . . . . Safety contactor. Opens when commanded by an error condition.

Core Food Probe (Xsc) . . . . . . Optional temperature probe used to determine internal temperature of item being cooked.

Detergent Pump (Fdn) . . . . . . Supplies detergent to cooking compartment. The pump has a thermal protection device (FPdn) that opens if the pump overheats. It is self-resetting once the pump cools.

Door Sensor (Sp) . . . . . Reed switch located above door and connected to the output control assembly. Opens when the door opens.

Encoder (Part of Af) . . . . . . Provides mechanical input to touch panel / display assembly.

Flow Meter (Bd) . . . . . . Measures filtered water supply flow rate.

Fuse F1 . . . . . . 3.15-amp fuse located in output control assembly.

Protects:

- Solenoid valve Yv (drain cleaning valve).
- Vent motor transformer Tmo and vent motor Mo.
- 3-way solenoid valve Yn (cleaning valve).
- 3-way solenoid valve Yf (cooling valve).

- Detergent pump temperature sensor FPdn.
- Detergent pump Pdn.

Fuse F2 . . . . . . 1-amp time delay fuse located in output control assembly. Protects:

- LED lighting Ee.
- Lighting transformer Te.

Fuse F3 . . . . . . 10-amp fuse located in output control assembly. Protects blower motor M1.

Fuse F4 . . . . . . 0.2-amp ultra fast fuse located in output control assembly. Protects:

- 3-way solenoid valve Yi (injection / steam valve).
- Solenoid valve Yc (condensate cooling valve).

Fuse F5 . . . . . . 3.15-amp fuse located in output control assembly. Protects:

- Blower motor over-temperature sensor Fm1.
- High-limit switch Fc.
- Safety contactor Ks.
- Heat Control contactor Kr.
- Axial fans Mt1 and Mt2.

Fuse F6 . . . . . . 4-amp fuse located in fuse block. Protects oven against input power disruptions.

Fuse F8 . . . . . . 10-amp fuse located on vent motor transformer board. Protects vent motor transformer / motor.

Fuse F9 . . . . . . 10-amp fuse located in fuse block. Protects blower motor M1.

High Limit Switch (Fc) . . . . . . Monitors cavity internal temperature. When temperature exceeds 554 °F, it opens and removes power to the heating elements.

E68 Error code for high limit switch.

Injection Port . . . . . . Supplies filtered water to cooking compartment for steam generation.

Lighting Transformer (Te) . . . . . . Reduces / converts 230 VAC power to 15 VDC for use by lighting LEDs.

Output Control Assembly (AR) . . . . . . Incorporates two primary components:

- Control board.
- Relay board.

The control board monitors physical input signals and operator commands. It then signals the relay board to change various components states (valves open / close, pumps run, etc.).

Pressure Restrictor . . . Limits filtered water supply pressure to 43 Psi.

Primary Transformer (Ta) . . . . . . Converts facility input voltage to 230 VAC for use by oven electronic / electrical components.

Solenoid Valve (Yc) . . . Drain solenoid. Supplies water to condensate drain when open (water flow).

Solenoid Valve (Yf) . . . Cooling solenoid. Part of 3-way valve. Supplies cooling water to cooking compartment injection port when open (water flow).

Solenoid Valve (Yi) . . . Injection solenoid. Part of 3-way valve. Supplies water to cooking compartment injection port for steam generation when open (water flow).

Solenoid Valve (Yn) . . . . . . Cleaning solenoid. Part of 3-way valve. Supplies water to mix with detergent for cooking compartment cleaning when open (water flow).

Solenoid Valve (Yv) . . .	Drain solenoid. Supplies water /detergent to cooking compartment cleaning port when closed (no water flow). Supplies water / detergent to condensate drain when open (water flow).
Suppressors (Zr / Zs)	An AC filter network that provides relay contact protection, noise circuit reduction, and EMI/RFI reduction. It is placed across the contactor coil.
Touch Panel / Display Assembly (Af)	Acts as primary operator input and monitoring interface. Provides both mechanical (via encoder) and touch screen inputs. It provides monitoring of operational state as well.
Vent Motor (Mo)	Used to position a restrictor plate in the vent to provide additional control of cavity temperature.
Vent Motor Transformer (Tmo) . . .	Reduces 230 VAC to 24 VAC for use by vent motor.
USB Port	Used to allow updating of software / firmware. Also allows for downloading of preset cooking instructions.

OUTPUT CONTROL ASSEMBLY

Refer to table (OUTPUT CONTROL ASSEMBLY) below and for output control assembly connection information.

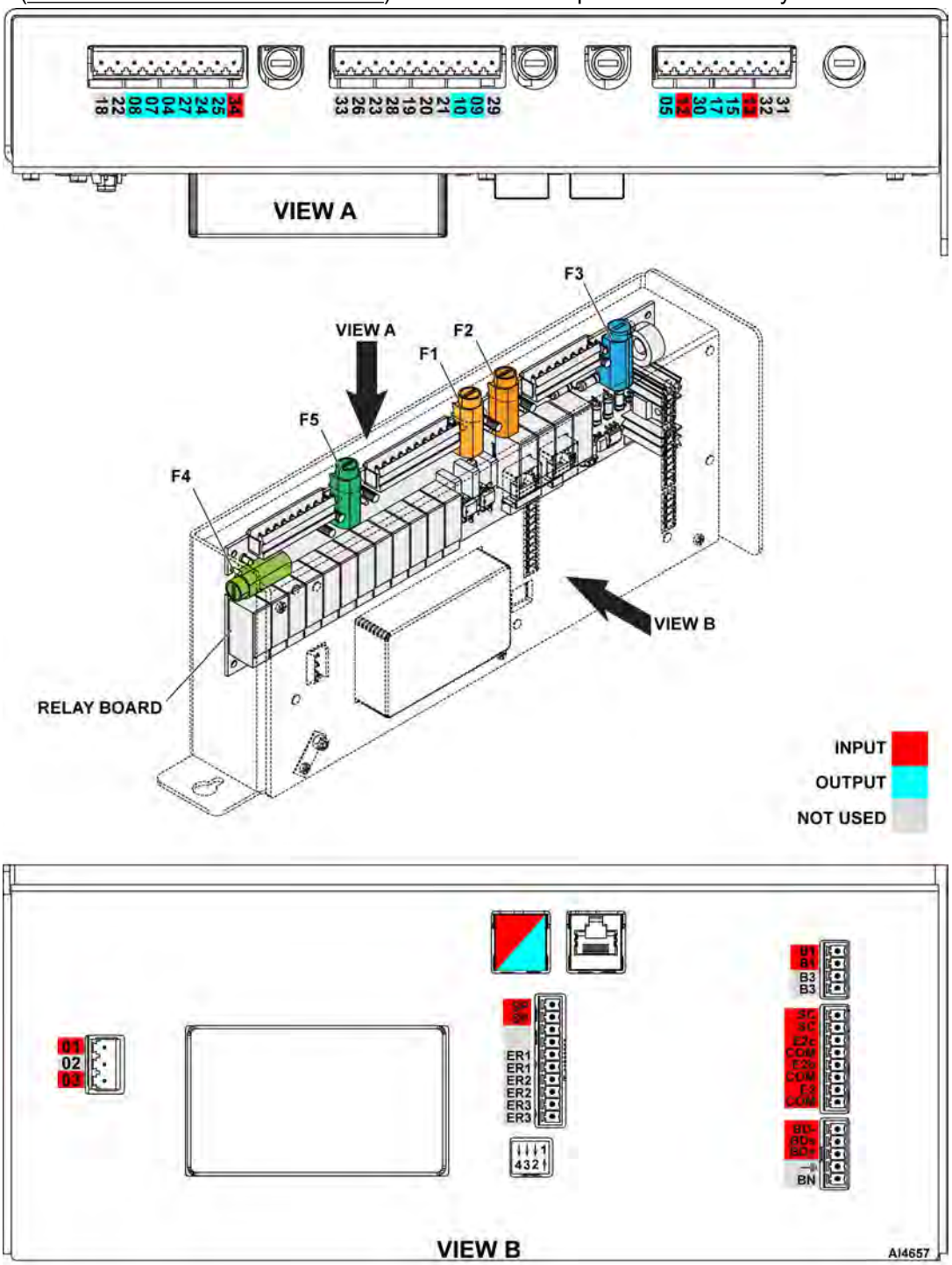


Fig. 94

Terminal	Associated Fuse	Input / Output	Function
1	NA	Input	AC line voltage (L2)
2	NA	N/A	N/A

Terminal	Associated Fuse	Input / Output	Function
3	NA	Input	AC line voltage (L1)
4	F5	Output	Axial / Cooling Fan
5	F2	Output	LED cavity lighting control
7	F5	Output	AxAxial / Cooling Fan
			Convection Fan Motor M1 control (thermal switch Fm1)
			Convection Fan Motor M1 control (high limit switch Fc)
			Safety contactor Ks control
8	F5	Output	Heater contactor Kr control
9	F4	Output	Condensate valve Yc control
10	F4	Output	Injection valve Yi control
12	F7	Input	Stepped down AC power
13	F9 (External) / F3 (Internal)	Input	AC line voltage (L2)
15	F3 (Internal)	Output	Convection Fan Motor M1 power (clockwise rotation)
17	F3 (Internal)	Output	Convection Fan Motor M1 power (counter-clockwise rotation)
24	F1	Output	Detergent supply valve Yv
25	F1 (Internal) / F8 (External)	Output	Vent motor Mo
27	F1 (Internal)	Output	Cleaning valve Yn
29	F1 (Internal)	Output	Detergent pump Pdn
30	F1 (Internal)	Output	Cooling valve Yf
34	NA	Input	Stepped down AC power
B1	NA	Input	Cavity temperature probe B1
BD- / BDs / BD+	NA	Input	Flow meter signal
E2 / E2b / E2c/ COM	NA	Input	Core probe
Sp	NA	Input	Door position

SOFTWARE

SOFTWARE VERSION HISTORY

Checking the Software Version

NOTE: New units require software Updates during start-up or installation.

NOTE: The version of software can be seen in the “TOOLBOX” tab next to the serial number of the unit. Each card is identified by its assigned software number:

EXAMPLE:

Fig. 95

MAJ_FPV2_IHM248_UC247b_FLA243_REL118_GAZ109_GTW022

SOFTWARE UPDATE PROCEDURE

NOTE: New units may require software Updates during start-up or installation.

NOTE: The version of software can be seen on TOOLBOX screen next to serial number of the unit. Each card is identified together with its software.number:

- IHM Nr: Touch panel / display assembly SD card.
- UC Nr: Touch panel / display assembly communications board.
- Param Nr: Touch panel / display assembly primary board.
- Fla Nr: Output control assembly board.
- Rel Nr: Output control assembly relay board.

Software Version *(Example shown, software updates frequently.)*

IHM Nr 229 UC Nr 224 - Param Nr Abs

Software Version *(Example shown, software updates frequently.)*

Fla Nr 221 Rel Nr 114 - Gaz Nr 106

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 > Minijet Combi Oven.

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

NOTE: Once the file is copied to the USB drive, proceed to the next step.

2. Safely eject USB flash drive from PC.
3. Verify oven is plugged in.
4. Open door.

NOTE: Opening the door will keep the oven from heating during this procedure.

5. Disconnect gas control card RJ45 cable.
6. Press encoder dial (black knob) to turn oven on. After screen loads, press pause on touch screen to bypass preheat.
7. Select Tool Box on screen display.

Fig. 96

8. Insert flash drive lower front of oven.

Fig. 97

9. Select YES on update message (Fig. 98) displayed on screen.

Fig. 98

NOTE: Wait approximately 7-10 minutes for software to update. In some cases software may require multiple updates to complete the update sequence. **VERIFY** all yellow numbers match the current code before assuming software has been updated completely.

NOTICE

Removal of USB flash drive or input power while loading software may result in corrupted installation.

10. Remove USB flash drive after updating is complete.
11. Select Tool Box on screen and verify software has updated.
12. Enter SAVBcheck mark to enter the toolbox mode.
13. Select Client Parameters on screen.

Fig. 99

14. Enter: **0000** and select **green check mark**.

Fig. 100

15. Select Next. Verify EN, ABC and JET are selected. Verify COMMON is not selected. Push Back button twice.

Fig. 101

16. Select Technical Parameters.

Fig. 102

Example shown, software updates frequently.

IHM Nr 218	UC Nr 218
FLA Nr 212	REL Nr 109

17. Enter: **SAVB** and select **green check mark**.

Fig. 103

18. Verify Settings is lit on Tool Box screen.

Fig. 104

19. Verify model being serviced is showing on Manual screen.

NOTE: Software has been loaded successfully.

PROGRAMING

Setting the Software Language

1. Select "TOOL BOX" menu.
2. Select "Client parameters" screen.
3. Enter the password «CHEF» **"√ "**: Permanent password (lower or uppercase).
4. Validate "V".
   - When finished, if the code is correct access the menu in not re-enter the PIN number.
5. Modify programed language if necessary.
   A. (En : English by default).
   B. Select the zone of the value to be changed.
6. Adjust the value using the coder knob.

Fig. 105

Oven Settings

1. Select the "TOOL BOX" menu.
2. Select the "Technician parameters" screen.
3. Enter the password : «SAVB» - Validate "V": When finished, if the code is correct access the menu in not re-enter the PIN number.
4. Reconfigure the oven.
   A. Select the zone of the value to be changed.
   B. Adjust the value using the coder knob.

Fig. 106

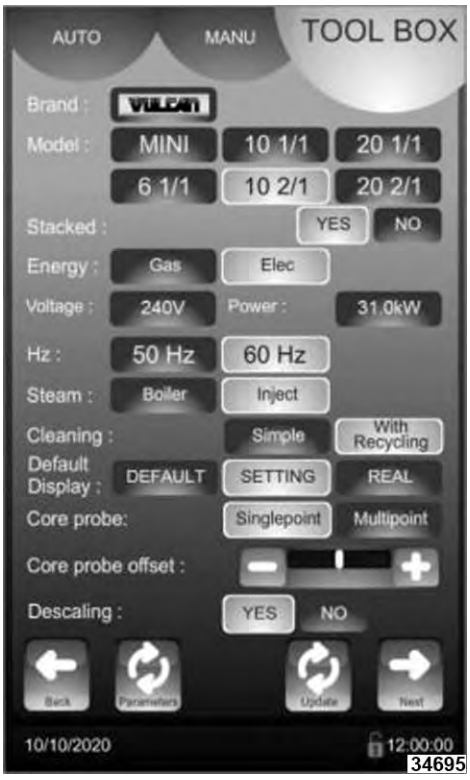


Fig. 107

- Model: Number of levels and size.

Fig. 108

- Export historic error messages to USB stick (Excel compatible format).
- Export historic counter data to USB stick (Excel compatible format).
- Flowmeter frequency equal to 4100 Imp/L.

Fig. 109

Error Message History

- Displays the list of error messages in the order they appeared.
- Communication signal quality screen card/ power card.
- For a QOS <80% see error E46.
- Pressing «Return» takes you back to the previous screen.

Fig. 110

CPT00	Total hours of operation.
CPT01	Hours in convection mode.
CPT02	Hours in steam mode.
CPT03	Hours in combination mode.
CPT04	Number of door openings.
CPT05	Number of gas safety activations (when error E67 appeared).
CPT06	Time that the electronics have operated at over 158° F (70°C) in hours.
CPT07	Time output S21 has operated in hours.
CPT08	Time output S10 has operated in hours.
CPT09	Timeout S30.

1. Select the "TOOL BOX" menu.
2. Select the "Client parameters" screen.
3. Enter the password «CHEF»: Permanent password (lower or uppercase).
4. Validate "V": When finished, if the code is correct access the menu in not re-enter the PIN number.

Fig. 111

5. To modify or enter the value for the capacity of the water treatment system (in liters).
6. Set to zero by default (if the oven does not have a dedicated water treatment system).
   A. Select the zone to be changed.
   B. Adjust with the coder knob.

   * Press « RESET » * Confirm by pressing « YES »
7. After any regeneration of the water treatment, reset the counter as required.
   A. Press « RESET ».
   B. Confirm by pressing «YES».

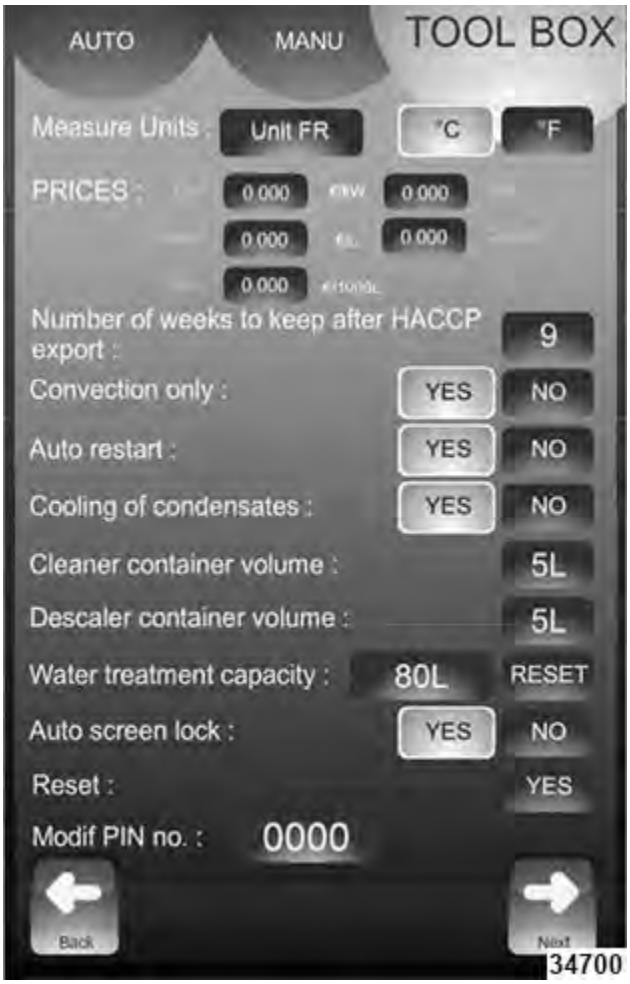


Fig. 112

- The water treatment system's capacity in liters.
- Reset.
- By default, set to zero (if there is dedicated treated water supply to the oven).

NOTICE

If water treatment capacity meter is equal to or less than 0, you will find in the error codes, error i8.

Screen Card Setttings

NOTE: Screens are common to several models. Once a screen has been programmed to control an oven it cannot be fitted to any other type of equipment. If necessary it must be returned to the factory for re-initialisation.

Required for configuration:

- Blank USB stick.
- Max capacity = 32 Gb Formatted for FAT32 (Default unit allocation size = 4096 bytes) or formatted for FAT (Default size = 32 Kb).
- Minimum of 5 Mb of free space is required.

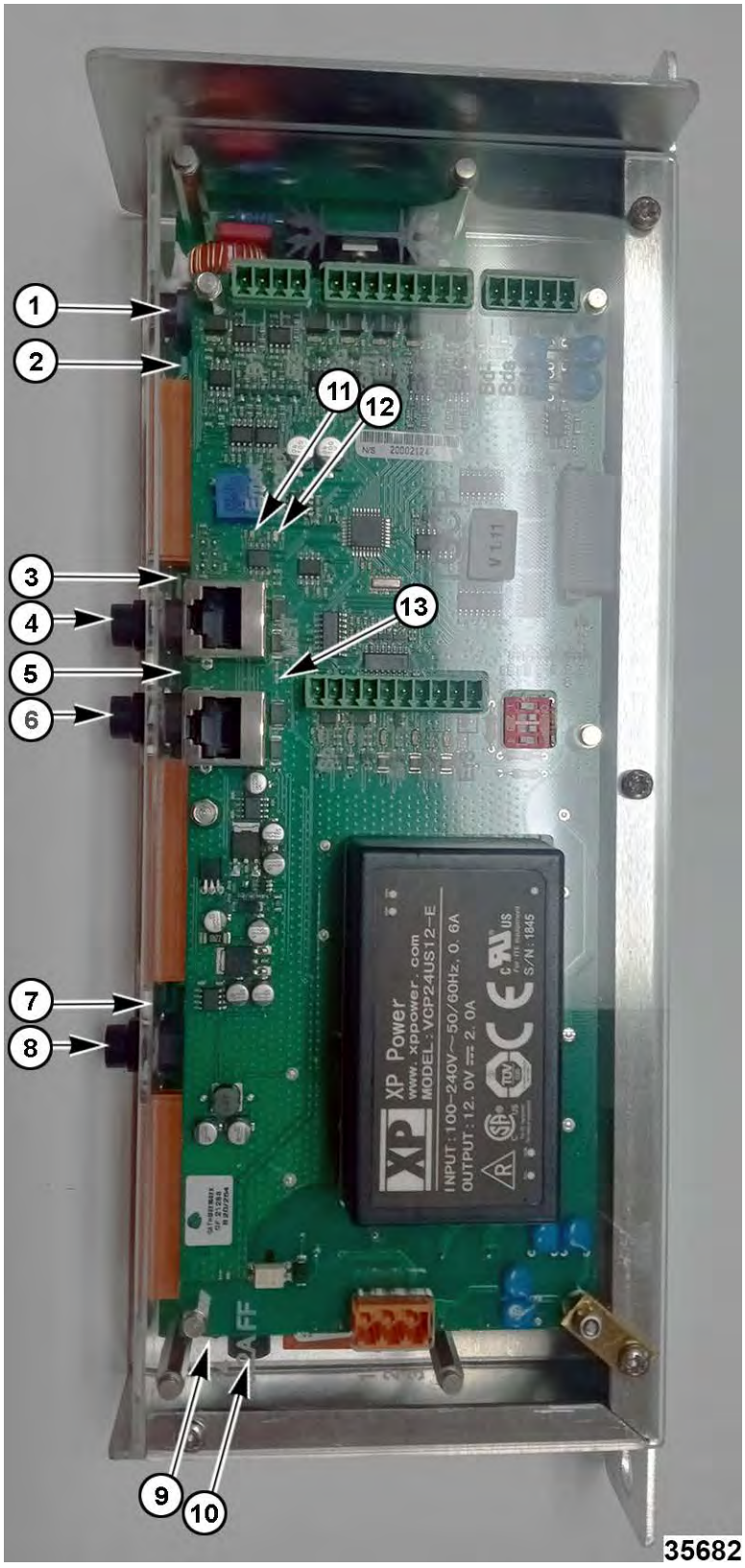
Configuration

1. Insert USB stick.
2. Turn oven on.
3. Select language on installation screens (French or English).
4. Select type of device and OK.

   NOTE: If device doesn't match or is not found, turn power off and check the position of micro switches.
5. Wait for configuration phases to auto run.
6. Remove USB stick.
7. Follow instructions to configure interface.

Fig. 113

BOARDS



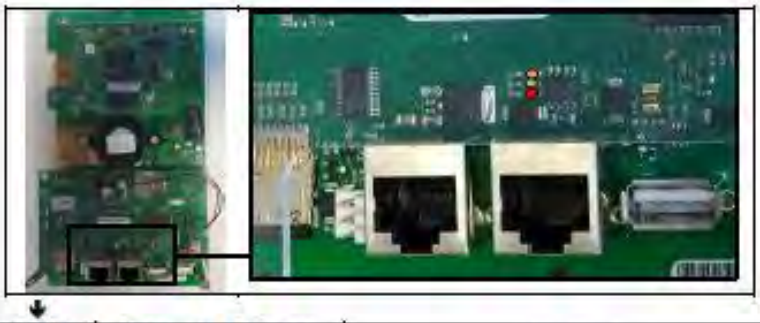
POWER SUPPLY BOARD

Item	Description
1	Fuse 10 Amp, F3, Time delay
2	Status LED, F3
3	Status LED, F2
4	Fuse 1 Amps, Time Delay, F2
5	Status LED, F1
6	Fuse 3.15 Amps, F1
7	Status LED, F5
8	Fuse 3.15 Amps, F5
9	Status LED, F4
10	Ultra Fast Fuse 2 Amps, F4
11	Communication LED, Reception
12	Communication LED, Emission
13	Supply, LED

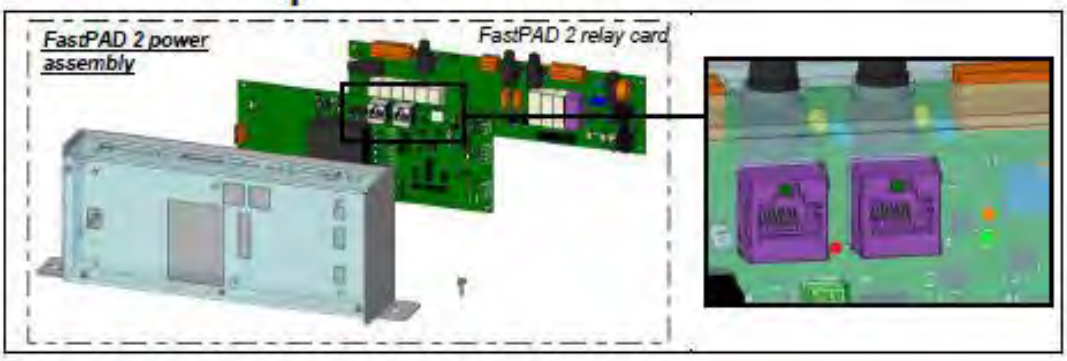
LED Red → → →	Power on	LED steady
LED Yellow/Orange →	Emitting	LED steady or flashing
LED Green → → →	Receiving	

A flashing LED is considered active as is a steady one.

Diagnostic of electronic faults:



FastPAD 2 screen card	Ensemble puissance FastPAD 2	Diagnostic	Actions
R J V	R J V	- FastPad 2 Power assembly OK - FastPad screen OK	- Fonctioning normally
		- Supply fault	- Check the voltage between terminals 1 and 3 on the relay card
	R	- Problem communicating with the FastPAD screen	- Replace the FastPAD screen card and or the interconnecting cable
R V	R V	- FastPad 2 UC power card defective	- Replace FastPAD 2 power assembly
R	R	- Screen non function	- Replace the FastPAD screen
R V	R	- Interconnecting Cable between the screen and power assembly faulty	- Replace the interconnecting cable



35681

Fig. 115

DISPLAY SCREEN CONTROLS AND INFORMATION

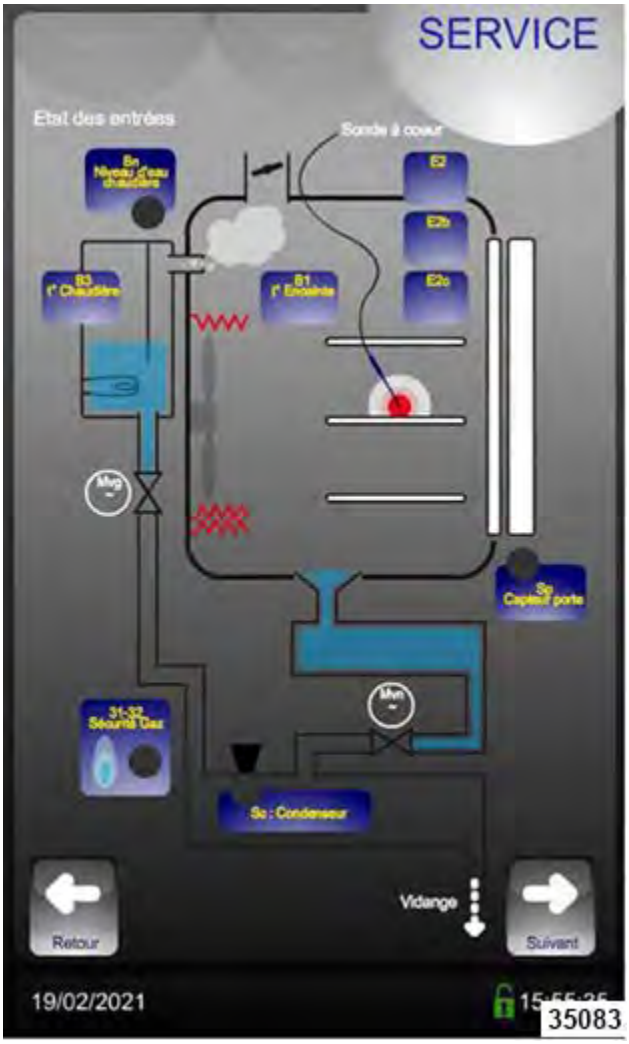
ACCESS MAINTENANCE SCREENS

Verify 2 electronic cards are functioning with client information and error messages displayed, activate diagnostic assistance module which consists of 3 screens.This will allow you to control the input and output appliances and peripherals feeding the cards:

- Screen 1 gives control of temperature, door, water level.
- Screen 2 gives control of outputs to ventilation, heating, lighting, safety contactor, the vent outlet.
- Screen 3 gives control of hydraulics outputs, solenoids, wash pump and wash tank.

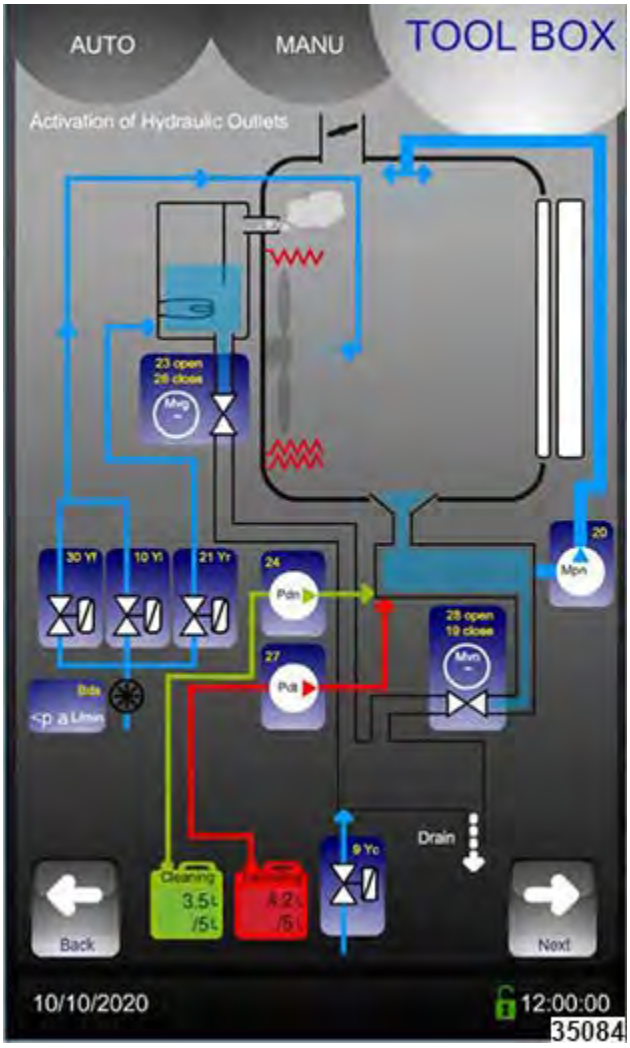
1. Go to "TOOL BOX" screen.
2. Select "Technical Parameters".
3. Enter password “SAVB” password.
4. Validate **" √ "**: If code is correct the menu can be accessed. If not return to inputting the PIN.
5. Press "Next". Scroll through the different screens using “Next” button.

Fig. 116



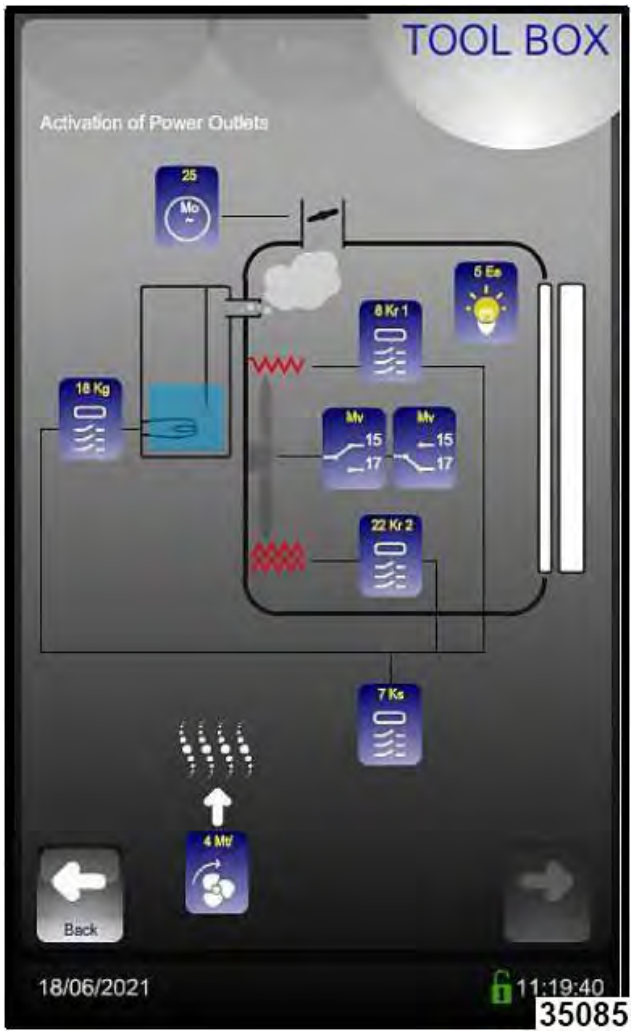
ENTRY SCREEN

Entries	Normal State
B1 E2-E2b-E2c Sp	Cavity Temperature Core Probe Temperature 0 = Door Open 1 = Door Closed
31-31	0 = Normal Operation
	1 = Gas Safety Activated



HYDRAULIC OUTPUT ACTIVATION SCREEN

Touch	Power Card Output No.	Components	Function	Valves Open Flow
Pdn	24	Detergent Pump	one press = 0.5s of operation	Active
Pdt	27	Descaling Pump	one press = 0.5s of operation	L3 Flow @ 169 Oz / Min.
Yf	30	Cooling Solenoid	one press = 1 min. of operation	L2 flow @ 17 Oz / Min.
Yi	10	Water Injection	one press = 1 min. of operation	L1 Flow @ 8.5 Oz / Min.
Bds	Bds	Solenoid Flow Meter	Indicates actual flow rate	NA
Yc	9	Condenser Solenoid	one press = 1 min. of operation	L4 Flow @ 27 Oz / Min.
Mvn	19-28	Drain Valve	One press = open and close cycle	Gravity Flow
Mpn	20	Wash Pump	one press = 0.5s of operation	Active



ELECTRIC OUTPUT ACTIVATION SCREEN

Touch	Power Card Output No.	Components	Function
Mo	25	Vent Motor	one press = start /
Ee	5	Lighting	one press = stop
Kr1	8	Contactor	one press = 0.5s of operation
Kr2	22	Fan	one press = 0.5s clockwise
Mv	15	Fan	one press = 0.5s anti clockwise
Mv	17	Safety Contactor +	one press = 0.5s of operation
Ks	7	Technical Ventilation 2	one press = start /
Mt	4	Technical Ventilation	one press = stop

AUTO SCREEN CONTROLS AND INFORMATION

The **AUTO** screen (Fig. 120) provides user access to pre-programmed functions, settings, and recipes. Additional information regarding the features and functions of this screen is available in the USER GUIDE.

Fig. 120

NOTE: Units are shipped with zero "my recipes" so this may be empty.

MANUAL SCREEN CONTROLS AND INFORMATION

The **MANUAL** screen (Fig. 121) provides user access to manually controlled functions and settings. Additional information regarding the features and functions of this screen is available in the USER GUIDE.

Fig. 121

TOOL BOX SCREEN CONTROLS AND INFORMATION

The **TOOL BOX** screen (Fig. 122) provides access to additional screens used to configure the oven as well as user documentation.

Fig. 122

The primary Tool Box screen provides:

- Auto clean schedule (if enabled). See for information on configuring the schedule.
- Manual Cleaning icon (if enabled).
- Access to the User Manual. See for additional information.
- Access to the Data Exchange screen. See for additional information.
- Access to the Client Parameters screens. See for additional information.
- Access to Installation Parameters screen. See for additional information.
- Access to Technical Parameters screens. See for additional information.
- Service and Culinary contact phone numbers. This information is configured in Client Parameters.
- Scheduled service information. The service periodicity is configured in Technical Parameters.

In addition, the oven's serial number, output control software version, and touch screen display software version are provided as well.

AUTO CLEANING SCREEN CONTROLS AND INFORMATION

Checking / setting auto cleaning parameters is required if:

- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

1. Access the **Auto Cleaning** screen as follows:
   A. Select **TOOL BOX** (1, Fig. 123) icon.

Fig. 123

   B. If **Rinsing** (2, Fig. 123) and **Cleaning** (3) icons are shown, select **Auto Cleaning** icon (4) to activate login screen.
   C. On login screen, enter password (**CHEF**) (1-4, Fig. 124).
   D. Select √ (5, Fig. 124) icon.

Fig. 124

2. Once the password is entered, the **Auto Cleaning** screen Fig. 125 will become active.
3. Set / change **Auto Cleaning** screen parameters by:
   - Selecting the **CLEAN** icon under the desired day and toggling the level (Light / Medium / Intense / None).
   - Selecting the **HOUR** icon and entering the start time (Hours : Minutes).

Fig. 125

4. If the schedule is valid (able to be performed based on operating schedule) the **Valid** icon turns ON.
5. Press START to save the auto cleaning schedule.
6. The display returns to the primary **TOOL BOX** screen.

MANUAL CLEANING SCREEN CONTROLS AND INFORMATION

Checking / setting manual cleaning parameters is required if:

- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

1. Access **Manual Cleaning** screen as follows:
   A. Select **TOOL BOX** (1, Fig. 126) icon.

Fig. 126

B. If **Rinsing** icon (2, Fig. 126) and **Auto Cleaning schedule** are shown, select **Manual Cleaning** icon (4) to activate login screen.

C. On login screen, enter password (**CHEF**) (1-4, Fig. 127).

D. Select √ (5, Fig. 127) icon.

Fig. 127

2. Select the desired cleaning action / time (Fig. 128).
    - Pressing **RINSING** then **START** icons initiates a 1.0 second rinse.

NOTE: Cleaning cycles are in minutes.

- Pressing **CLEANING** icon provides 4 possible actions:
    - **LIGHT**: a cycle of 11.0 cleaning, 4.0 seconds rinsing, then draining.
    - **MEDIUM**: a cycle of 20.0 cleaning, 4.0 seconds rinsing, then draining.
    - **INTENSE**: a cycle of 31.0 cleaning, 4.0 seconds rinsing, then draining.
    - **PRIMING CLEANING**: initiates the LIGHT cleaning cycle/

3. Press **START** icon to initiate desired cycle.

4. After cleaning cycle completes, the primary **TOOL BOX** screen becomes active.

Fig. 128

USER MANUAL INFORMATION

The **User Manual** screen (Fig. 129 (provides access to embedded videos and Frequently Asked Questions (FAQ).

Fig. 129

DATA EXCHANGE CONTROLS AND INFORMATION

Checking / setting data exchange information is required if:

- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

1. Access **Data Exchange** screen as follows:
   A. Select **TOOL BOX** (1, Fig. 130) icon.

Fig. 130

B. Select **Data Exchange** (2, Fig. 130) icon.

C. Enter password (**CHEF**) (1-4, Fig. 131).

Fig. 131

D. Select √ (5, Fig. 131) icon.

2. Configure, upload, export, and view data exchange information (Fig. 132) by selecting the appropriate icon.

Fig. 132

- HACCP (Hazard Analysis and Critical Control Point). When set to ON, the oven records HACCP data for either viewing or export. When active, the sample time can be set from 5 to 240 seconds by rotating the encoder.
- Radio. This feature does not work in this configuration.
- Recipes:
  - Selecting **Upload** icon loads recipes from a flash drive inserted in the USB port.
  - Selecting **Export** icon downloads recipes to a flash drive inserted in the USB port.
- HACCP:
  - Selecting **Export** icon downloads HACCP data to a flash drive inserted in the USB port.
  - Selecting **VIEW** icon activates a screen to show HACCP data.
- Consumptions:
  - Selecting **Export** icon downloads oven operational information to a flash drive inserted in the USB port.
  - Selecting **VIEW** icon activates a screen to show oven operational information data.
- Pictures:
  - Selecting **Upload** icon loads photos from a flash drive inserted in the USB port.
  - Selecting **Export** icon downloads photos to a flash drive inserted in the USB port.
  - Selecting **VIEW** icon activates a screen to show photos.
- User Manual:
  - Selecting **Export** icon downloads user manual information to a flash drive inserted in the USB port.
  - Selecting **VIEW** icon activates the user manual screen.
- User Profile:
  - Selecting **Upload** icon loads user data from a flash drive inserted in the USB port.
  - Selecting **Export** icon downloads user data to a flash drive inserted in the USB port.

3. Select **Back** icon to return to primary **TOOL BOX** screen.

CLIENT PARAMETER SCREEN CONTROLS AND INFORMATION

Checking / setting client parameters is required if:

- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

NOTE: There are three screens associated with client parameter controls and settings.

1. Access **Client Parameters** screens as follows:
   A. Select **TOOL BOX** (1, Fig. 133) icon.

Fig. 133

B. Select **Client Parameters** (2, Fig. 133) icon.

C. Enter password (**CHEF**) (1-4, Fig. 134).

Fig. 134

D. Select √ (5, Fig. 134) icon.

2. Set / change screen 1 client parameters (Fig. 135) by either:
   - Selecting the icon directly.
     - Screen Beep
     - Auto Winter / Summer Hour
     - Oven Preheat (enable / disable)
     - Boiler preheating (Not used in this configuration)
     - Preheating before cooking
     - Delta T Mode
   - Selecting the icon and rotating the encoder dial to set the desired value.
     - Language
     - Brightness
     - Sound level
     - No. of end of cooking beeps

- Date / Hr
- Oven Preheat (temperature)
- Hold
- Default core temperature

Fig. 135

3. Select **Next** icon to show client parameters screen 2.
4. Set / change screen 2 client parameters (Fig. 136) by either:
   - Selecting the icon directly.
     - Default Mode
     - Manual Type Mode
     - Cooling in MANUAL Mode
     - Message (text with keypad entry)
     - RECIPES
       - Client recipe name (text with keypad entry)
       - Authorization
       - Display
       - Library
     - Recipes sort by family
     - Screen saver (enable / disable)
   - Selecting the icon and rotating the encoder dial to set the desired value.
     - Humidification rate for Regeneration
     - Screen saver (after)

Fig. 136

5. Select **Next** icon to show client parameters screen 3.
6. Set / change screen 3 client parameters (Fig. 137) by either:
   - Selecting the icon directly.
     - Measuring Units
     - Convection only
     - Auto restart
     - Cooling of condensates

- Water treatment capacity (reset)
- Rest
- Modify PIN no. (text with keypad entry)

- Selecting the icon and rotating the encoder dial to set the desired value.
  - Prices
  - Number of weeks to keep after HACCP export
  - Cleaner container volume
  - Water treatment capacity

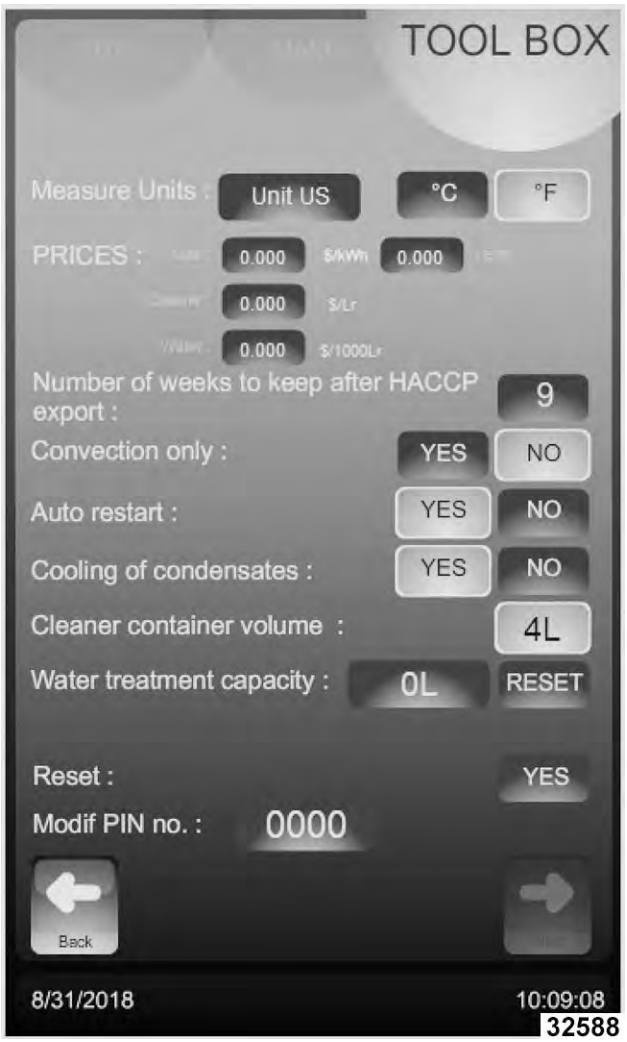


Fig. 137

7. Select **Back** icon to return to primary **TOOL BOX** screen.

INSTALLATION PARAMETERS SCREEN CONTROLS AND INFORMATION

Checking / setting client parameters is required if:

- Initial installation is performed.
- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

1. Access **Installation Parameters** screen as follows:
   A. Select **TOOL BOX** (1, Fig. 138) icon.

Fig. 138

   B. Select **Installation Parameters** (2, Fig. 138) icon.
   C. Enter password (**INSB**) (1-4, Fig. 139).
      Select √ (5, Fig. 139) icon.

Fig. 139

2. Set / change installation parameters (Fig. 140) by either:
    - Selecting the icon directly.
        - Reset remaining time before service Yes / No).
        - Maintenance company.
            - Contact (text with keypad entry).
            - Tel. no (text with keypad entry).
            - Culinary advisor Tel. no (text with keypad entry).
    - Selecting the icon and rotating the encoder dial to set the desired value.
        - Service every (hours).
        - Hours / Days (average length of daily operation).
        - Water hardness (ppm).

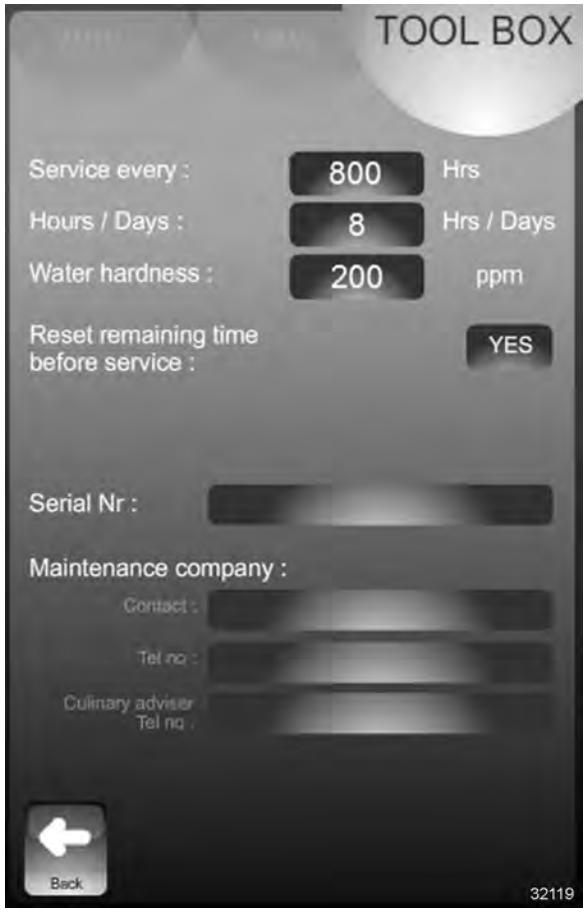


Fig. 140

3. Select **Back** icon to return to primary **TOOL BOX** screen.

TECHNICAL PARAMETERS SCREEN CONTROLS AND INFORMATION

Checking / setting technical parameters is required if:

- Output Control Assembly is replaced.
- Touch Pad / Display Assembly is replaced.
- FastPAD software / firmware is updated.

NOTE: There are five primary and two secondary screens associated with technical parameter controls and settings.

1. Access Technical Parameters screens as follows:
    A. Select **TOOL BOX** (1, Fig. 141) icon.

Fig. 141

B. Select **Technical Parameters** (2, Fig. 141) icon.

C. Enter password (**SAVB**) (1-4, Fig. 142).

Fig. 142

D. Select √ (5, Fig. 142) icon.

2. Select the appropriate icon to set / change technical parameters (Fig. 143):
   - Brand.
   - Model.
   - Stacked.
   - Energy.
   - Hz.
   - Steam.
   - Cleaning.
   - Default Display.
   - Core Probe.

Fig. 143

3. Select **Update** icon to load parameters.
4. Select **Next** icon to activate **Error History / Counters** screen (Fig. 144).

Fig. 144

5. Select **Next** icon to show **State of Inlets** screen (Fig. 145).

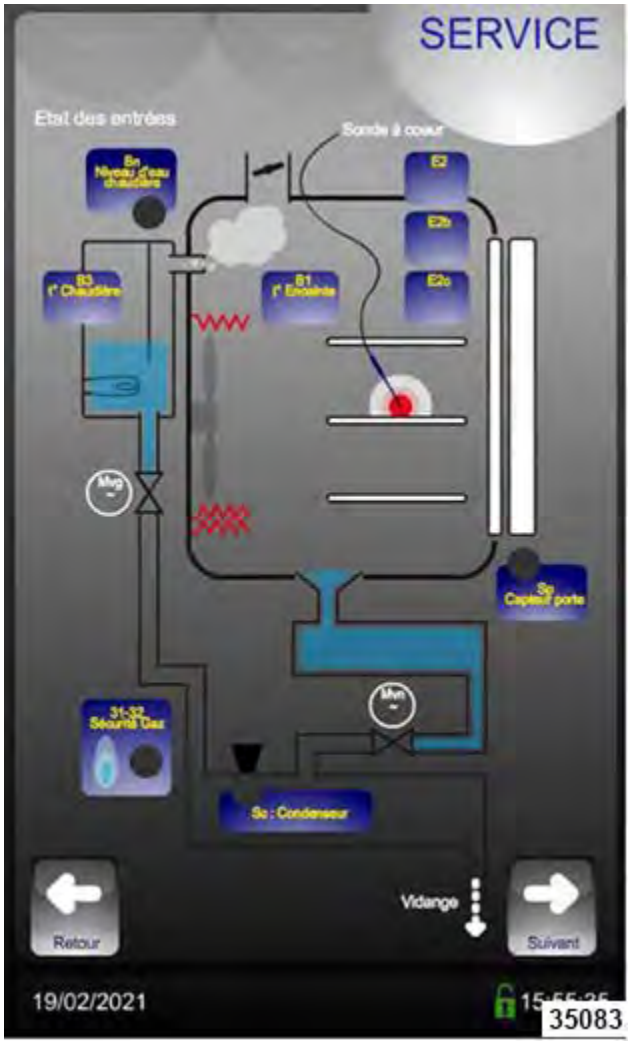


Fig. 145

6. Select **Next** icon to show **Activation of Hydraulic Outputs** screen (Fig. 146).

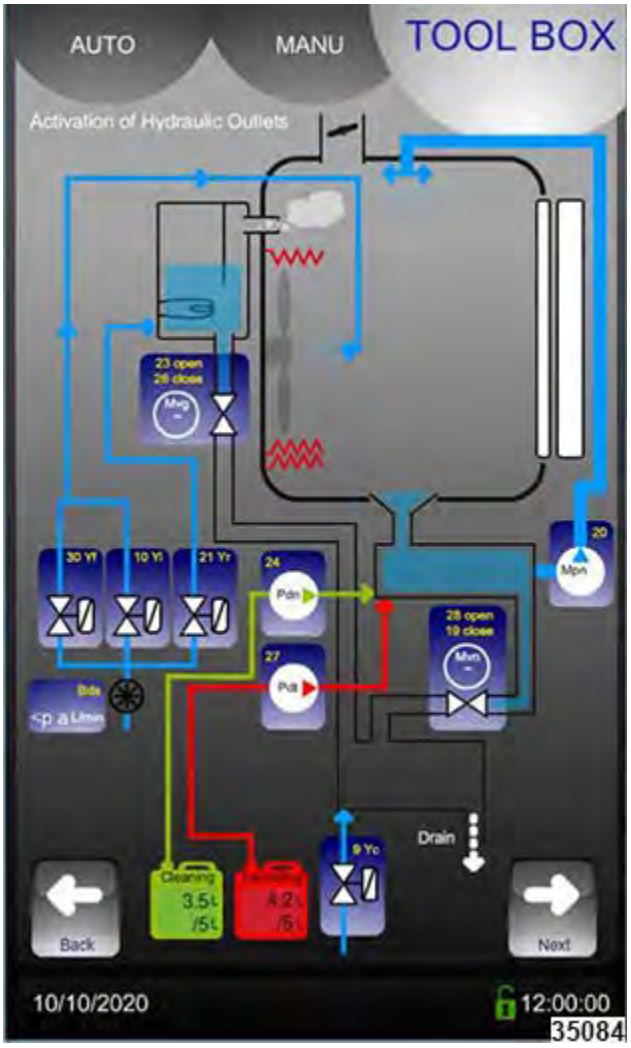


Fig. 146

7. Select **Next** icon to show **Activation of Power Outputs** screen (Fig. 147).

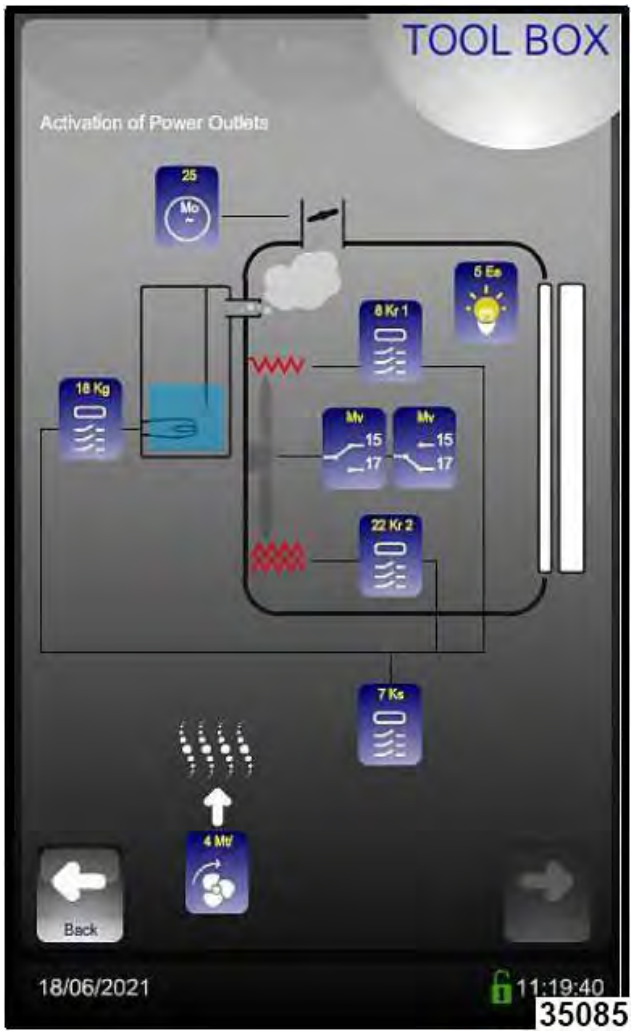


Fig. 147

8. Select **Back** icon to return to primary **TOOL BOX** screen.

WATER TREATMENT COUNTER

NOTE: This only functions if there are two separate supplies to the oven.

1. Open service tab.
2. Select the Client parameters button.
3. Enter "CHEF" PIN code « permanent » (lower or uppercase).
4. Validate **"√ "**: When entered if code is correct, access the menu, if not, re-enter PIN code.

Fig. 148

Water Treatment Capacity

A. Modify or enter value for the capacity of the water treatment system (in liters).
   1) Select zone to be changed.
   2) Adjust using coder knob.

5. After regeneration of water treatment, reset the counter as required.
   A. Press « RESET ».
   B. Confirm by pressing « YES ».

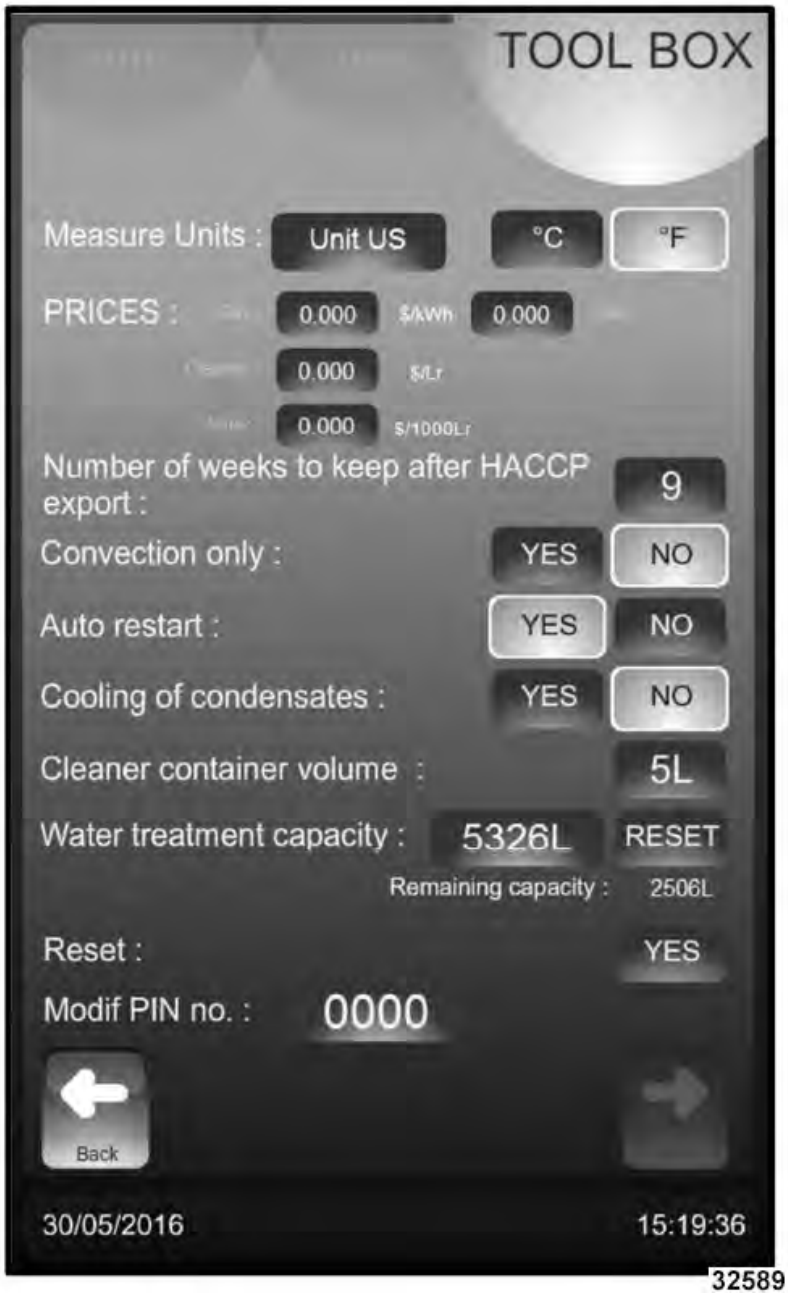

TOOL BOX
Measure Units :
Unit US
°C
°F
PRICES :
0.000
$/kWh
0.000
0.000
$/Lr
0.000
$/1000Lr
Number of weeks to keep after HACCP export :
9
Convection only :
YES
NO
Auto restart :
YES
NO
Cooling of condensates :
YES
NO
Cleaner container volume :
5L
Water treatment capacity :
5326L
RESET
Remaining capacity :
2506L
Reset :
YES
Modif PIN no. :
0000
Back
30/05/2016
15:19:36
32589

Fig. 149

DIAGNOSTICS

ERROR HISTORY / COUNTER SCREENS AND INFORMATION

Error and counter screens are access via the **Technical Parameters** screen. Refer to for information on how to activate the screens.

NOTE: Error and / or counter information can be viewed or downloaded.

ERROR HISTORY / COUNTER SCREENS

1. Select Error message history **View** icon (Fig. 150) to view error history. Select **Download** icon to download an Excel-compatible spreadsheet to a USB drive.

Fig. 150

2. Select Counters **View** icon (Fig. 150) to view operational counter information. Select **Download** icon to download an Excel-compatible spreadsheet to a USB drive.

ERROR HISTORY SCREEN

When the error messages history **VIEW** icon is selected, a list of errors (Fig. 151) is displayed.

Fig. 151

Refer to:

- TABLE for error information.
- Refer to wiring diagrams for component wiring and connections.
- for output control assembly connections.

COUNTER SCREEN

When the Counter **VIEW** icon is selected, a list of operational counters (Fig. 152) is displayed.

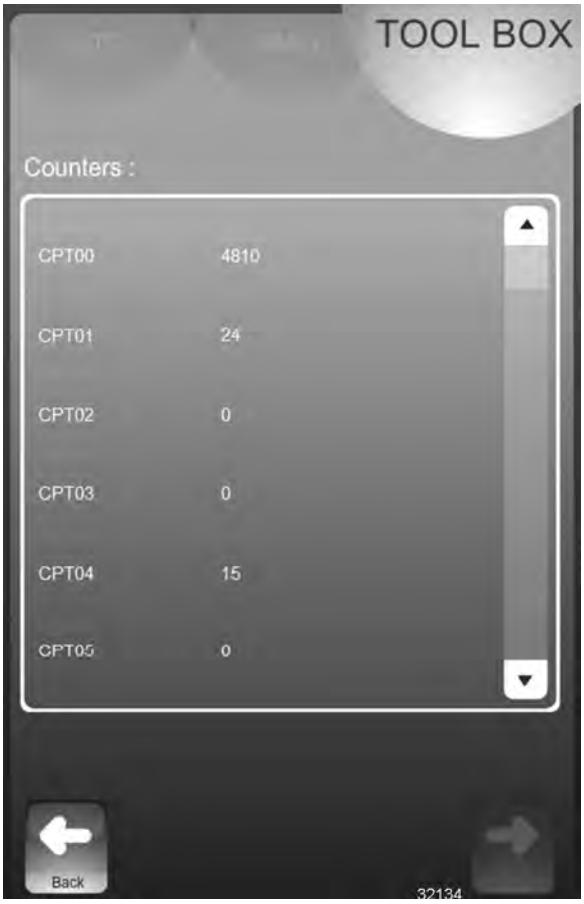


Fig. 152

Refer to the following table for counter information.

Counter	Information (All Time Provided in Hours)
CPT00	Total operating time.
CPT01	Convection mode operating time.
CPT02	Steam mode operating time.
CPT03	Combi mode operating time.
CPT04	Number of door openings.
CPT06	Hot electronics (> 158 °F [70 °C]) operating time.
CPT07 *	Output control assembly relay board output 21 operating time.
CPT08	Valve Yi operating time.
CPT09	Valve Yf operating time.
CPT10	Total operating time cooling + cleaning.
CPT11	Number of litres remaining in the water treatment system.

***** Function not used in Minijet configuration.

DIAGNOSTIC SCREENS

NOTE: Refer to TECHNICAL PARAMETERS SCREEN CONTROLS AND INFORMATION for information on how to access the diagnostic screens. Refer to OUTPUT CONTROL ASSEMBLY for information about output control assembly connections.

1. The **State of Inlets** screen (Fig. 153) provides the following indications:
   - **B1** - Cavity temperature (monitored by output control assembly input B1).
   - **E2 / E2b / E2c** - Core probe(s) temperature (monitored by output control assembly, power supply board, relay card) input E2, E2b, E2c).
   - **SP** - Door position (monitored by output control assembly input SP).

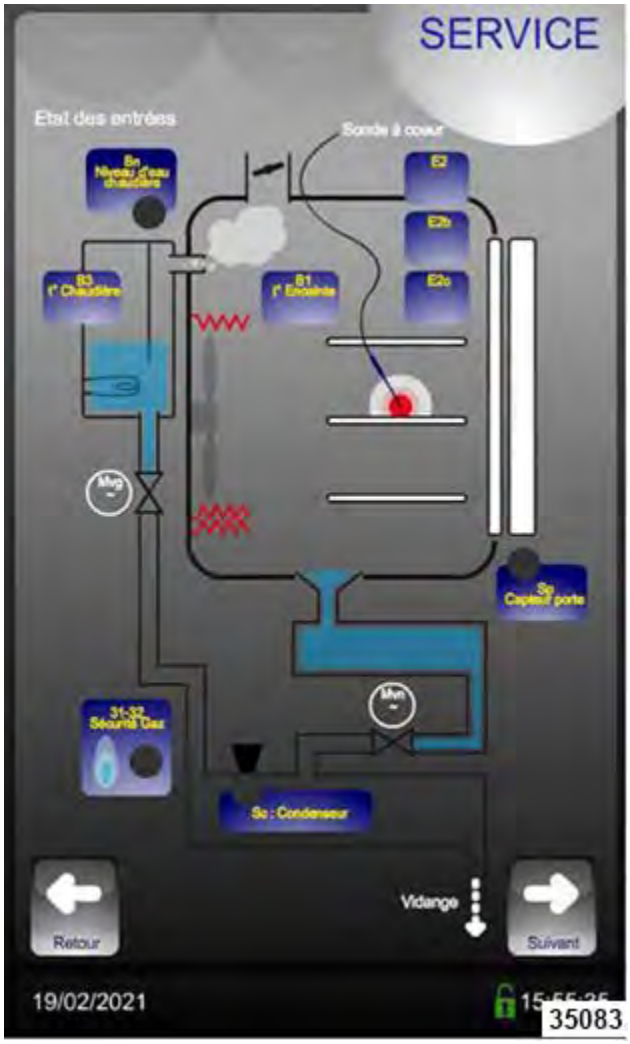


Fig. 153

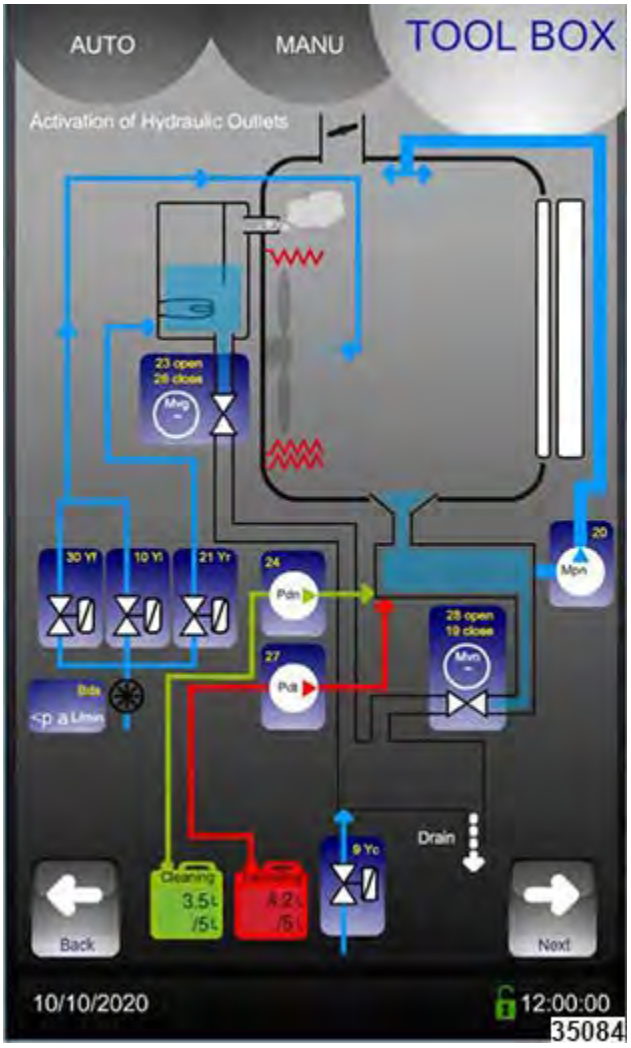


Fig. 154

2. The **Activation Hydraulic Outlets** screen (Fig. 154) provides the following indications / controls:
   - **BDS** - Flow meter (monitored by output control assembly input BDS).
   - **Yn** - Cleaning valve (controlled by output control assembly relay board output 27).
   - **Yf** - Cooling valve (controlled by output control assembly relay board output 30).
   - **Yi** - Injection valve (controlled by output control assembly relay board output 10).
   - **Yv** - Detergent valve (controlled by output control assembly relay board output 24).
   - **Yc** - Condensate cooling valve (controlled by output control assembly relay board output 9).
   - **Pdn** - Detergent pump (controlled by output control assembly relay board output 29).

NOTE: Door should be closed during all tests.

   A. Touch **Yn** to open cleaning valve for 0.5 second. Monitor flow via Bds reading.
   B. Touch **Yf** to open cooling valve for 60 seconds. Monitor flow via Bds reading.
   C. Touch **Yi** to open injection valve for 60 seconds. Monitor flow via Bds reading.
   D. Touch **Yv** to open detergent valve for 0.5 second.
   E. Touch **Yc** to open condensate cooling valve for 60 seconds.
   F. Touch **Pdn** to turn on detergent pump for 0.5 second.

3. The **Activation of Power Outlets** screen (Fig. 155) provides the following indications / controls:
   - **Mo** - Vent motor (controlled by output control assembly relay board output 25).
   - **Ee** - Cavity lamp (controlled by output control assembly relay board output 5).

- **Kr1** - Heater contactor (controlled by output control assembly relay board output 8).
- **Mv15** - Blower motor (Mt1) clockwise rotation (controlled by output control assembly relay board output 15).
- **Mv17** - Blower motor (Mt1) counterclockwise rotation (controlled by output control assembly relay board output 17).
- **Ks** - Safety contactor (controlled by output control assembly relay board output 7).
- **Mt** - Axial fan (Mt2) (controlled by output control assembly relay board output 4).

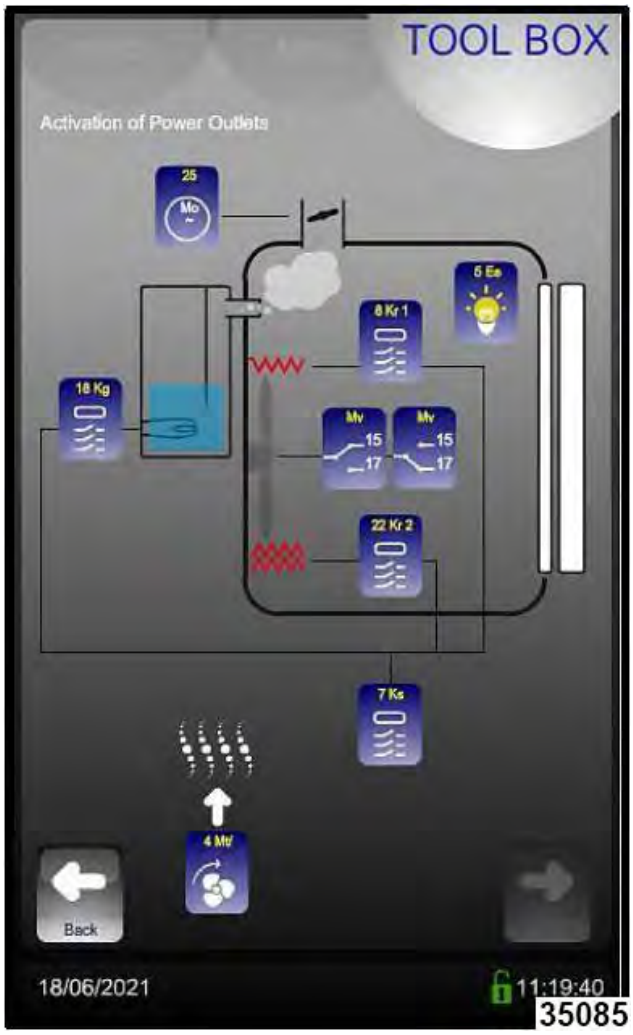


Fig. 155

NOTE: Door should be closed during all tests.

A. Touch **Mo** to turn on vent motor. Release **Mo** to allow vent flap to return to home position.

B. Touch **Ee** to toggle cavity lamp ON / OFF.

C. Touch **Kr1** to turn on heater contactor for 0.5 second.

D. Touch **Mv15** to turn on blower motor (clockwise rotation) for 0.5 second.

E. Touch **Mv17** to turn on blower motor (counter-clockwise rotation) for 0.5 second.

F. Touch **Ks** to turn on safety contactor for 0.5 second.

G. Touch **Mt** to toggle axial fan Mt2 ON / OFF.

TEMPERATURE PROBE TEST

There are two temperature probes: core and cavity. The cavity probe is permanently mounted in the oven cavity. The core probe is connected via a connector on the front panel of the oven.

Cavity Probe Test

1. Remove RIGHT SIDE PANEL.
2. Remove appropriate connector from output control assembly (Fig. 156).

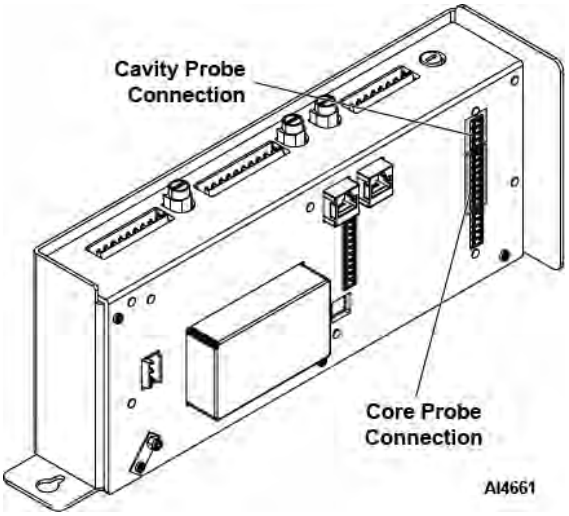


Fig. 156

3. Using a VOM meter, check resistance between temperature probe leads.
4. Compare measured resistance.
5. Replace probe if the resistance is grater than 5% different than value provided in chart.

Food Probe Test

The food probe must be checked using physical conditions. Use of a temperature tester is required. The core probe temperature is displayed on the technical parameters screen as readings E2, E2b, and E2c.

1. Place food probe and temperature tester probe in a pan of ice water. Both probes should measure the same temperature within 5 °F.
2. Place food probe and temperature tester probe in a pan of boiling water. Both probes should measure the same temperature within 5 °F.
3. If temperature difference is greater than 5 °F, replace core probe.
4. If the food probe temperature is not present or does not change, check wiring between front panel connector and output control board assembly.

PT100 PROBE CHECK

The PT100 probe resistance determines temperature. It has a resistance of 100 Ω at 32 °F (-0 °C) and 138.5 Ω 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. 157

TROUBLESHOOTING

TROUBLESHOOTING

⚠ 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.

Full Size PDF Chart

- TCM Troubleshooting Chart

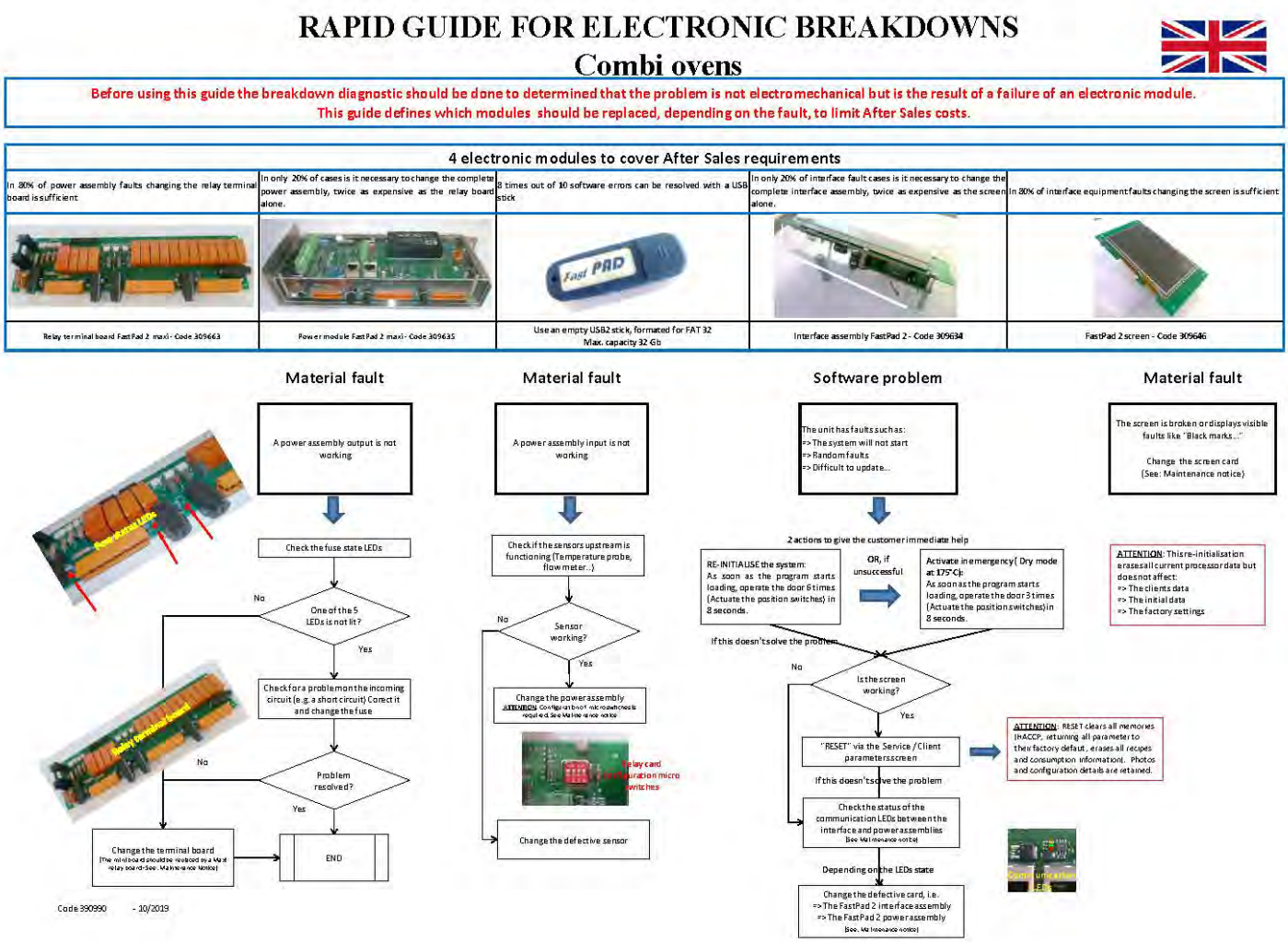


Fig. 158

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.

⚠ WARNING

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

1. There are three colors of screens associated with equipment errors.
    - A **GREEN** screen (Fig. 159) is displayed to provide information that does not impact operation.

Fig. 159

    - A **YELLOW** screen (Fig. 160) is displayed when errors occur that impact operation but do not shut down operation.

Fig. 160

- A **RED** screen (Fig. 161) is displayed when errors occur that impact and shut down operation.

Fig. 161

Refer to:

- TABLE below for error information.
- Refer to wiring diagrams for component wiring and connections.
- Refer to OUTPUT CONTROL ASSEMBLY for output control assembly connections.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
i28	Food probe not connected (**RED** error screen).	Cooking stops. Waiting for a Food probe to be connected.	Food probe not connected, or open or shorted.	Perform TEMPERATURE PROBE TEST.
E30	Electronics overheating (**YELLOW** error screen).	Cooking continues.	Drawing in hot air.	Installation problem: check for external heat source nearby.
			Air inlet obstructed.	Clean oven air vents.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION

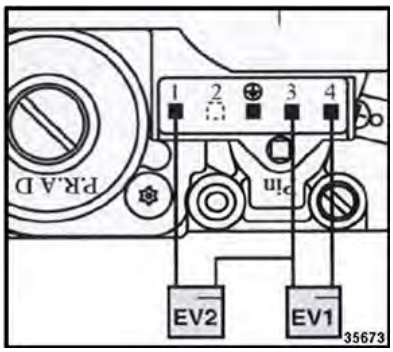
			Axial cooling fan(s) Mt1 and / or Mt2 not functioning.	Check axial cooling fan input power.
				• If present, replace fan(s).
				• If not present, check:
				  • output control assembly relay board fuse F5.
				  • output control assembly relay board output 7 (Mt2 power).
				  • output control assembly relay board output 4 (Mt1 power).

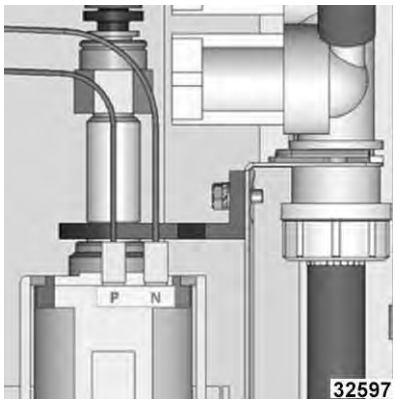
				If items listed above are OK, replace output control assembly.
i31	Electronics overheating: Temperature reduced to 356 °F (**YELLOW** error screen).	Cooking continues with cavity temperature reduced to 356 °F.	See error E30.	See error E30.
i33	Food probe non function or not plugged (**RED** error screen).	Cooking stops.	Food probe disconnected during a cooking cycle.	Perform TEMPERATURE PROBE TEST.
			Faulty Food probe.	
E32	Two faulty measurement points.	Probe disconnected during cooking.	Defective Food probe.	Connect the probe and check the values of E2 – E2b – E2c on the input screen. If "-" is shown, disconnect the connector (E2) from the card. . Check the values of the PT 100 probe (on the terminal block screws). If the value is incorrect, change the probe. If not check the connections or replace the FastPAD 2 power unit.
E46	Electronic communication fault (Bus RS485) (**RED** error screen).	**NOTE:** Cooking possible with reduced functionality at up to 347 °F. Cooking stops.	Loss of communication between the output control assembly and touch screen / display assembly.	Check communication LEDs on output control assembly and touch screen / display assembly.
				Check / replace Ethernet cable.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
E53	Short circuit of coil or motor or baffle non function (**RED** error screen).	Cooking stops.	**Fuse F5 open.**	
			Output control assembly relay board output 7 shorted to ground.	If shorted to ground, check: • Connecting wiring. • Axial fan Mt2 motor. • Contactor Ks coil. • Blower motor thermal switch FM1. • High limit switch Fc.
				If items listed above are OK, replace output control assembly.
			Output control assembly relay board output 8 shorted to ground.	If shorted to ground, check: • Connecting wiring. • Contactor Kr coil.
				If items listed above are OK, replace output control assembly.
			Output control assembly relay board output 4 shorted to ground.	If shorted to ground, check: • Connecting wiring. • Axial fan Mt1 motor.
				If items listed above are OK, replace output control assembly.
			Fuse F3 open.	
			Output control assembly relay board outputs 15 or 17 shorted to ground.	If shorted to ground, check: • Connecting wiring. • Blower motor M1. • Capacitor CM1.
				If items listed above are OK, replace output control assembly.
			Fuses F3 and F5 OK, E53 displayed.	
			Contactor Ks does not close during the oven initialization when the door is closed.	Check for defective: • Connecting wiring. • Blower motor thermal switch FM1. • Safety contactor Ks. • Output control assembly relay board (output 7).
				If items listed above are OK, replace output control assembly.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
			Contactor Ks closes during the oven initialization when the door is closed.	Check for defective: • Fuse F9. • Capacitor CM1. • Blower motor M1. • Output control assembly relay board output 15.
				If items listed above are OK, replace output control assembly.
			E53 appears during operation.	
			Blower motor thermal switch FM1 opens.	Check: • Blower fan / motor turn freely with no signs of binding. • Blower motor M1 windings resistance. • Blower motor thermal switch FM1.
				If blower motor and thermal switch are OK, replace output control assembly.
E61	Ambient probe short circuit (**RED** error screen).	Cooking stops.	Cavity temperature probe poorly connected / open.	Perform TEMPERATURE PROBE TEST. **NOTE:** Check what temperature the probe is reading in the inputs screen (TECH parameters) Check the wires are tightened on connection B1 on the relay card.
			Cavity temperature probe short circuited.	
E62	Ambient probe faulty or poorly connected (**RED** error screen).	Cooking stops.	Cavity temperature probe poorly connected (connection to relay card).	
			Probe wiring broken.	**NOTE:** Check what temperature the probe is reading in the inputs screen (TECH parameters) Disconnect (B1) from the card. Check the value of the PT 100 probe on the terminal screws (see the table for corresponding values). If values are incorrect, change the probe, if the probe is functioning, replace the relay card.
E67	Gas safety activated.	Cooking stops.	Software outdated.	Update software.
			Gas safety inlet to power assembly incorrect.	Check gas valve and inlet pressure with the whole kitchen operational (low pressure?). Check for wall outlet 120v polarity ensuring neutral and hot wires are not reversed.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
			Gas safety inlet to power assembly incorrect.	Check the ionization probe circuit in the inlet screen (TECH parameters). Disconnect the wire from terminal 32 on the power assembly: the screen continues to display Gas safety = 0. Reconnect 32 to a control phase (connection, 12 for example): Gas safety = 1. If not change FastPad 2 relay card.
			Gas ignition problem.	Check gas ignition.
			Flame control module problem.	Check ionisation at ignition probe. Burner ventilation. Change the control box.
			Gas fan not working.	Ensure the fan is powered (voltage on the power supply terminals -3-point terminal block). • If powered but not spinning, change the fan. • If not powered, check the 120V power. • If powered but not spinning, change the fan. • If not powered, check 120V power supply chain. (connections, contactor, transformer fuse etc.)
			Ignition not working.	Check the ignition function. • Disconnect the ignition electrode wire and activate output “18” of the power card from the technician menu. • A spark should be seen at igniter outlet. If not, check 230V voltage on output 18. • If there’s no voltage, check 230V electrical circuit.
			No gas, or gas flow/ pressure too low.	Check that gas is present at the inlet of the device.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
			Gas valve not working.	Check the resistance of coils Ev1 and Ev2. Ev1 (≈623 Ω) and Ev2 (≈3994 Ω). • Values other than 0, check gas pressure at the valve inlet is correct when burner is ignited. If the burner does not ignite, the valve is out of order. • If value is 0, the valve is out of order.  **Fig. 162**
			The ionization electrode does not detect the flame.	Check ELECTRODES (GAS BURNER). • Adjustment. • Connection. • Wiring.
			Flame control module not working.	At the end of the ignition sequence. Cut the gas supply, start cooking: • If oven shows “Gas error”, the flame control module is working, Check the other components. • If there is no error message, the flame control module is out of order.
E68	Cavity at +554 °F (**RED** error screen).	Cooking stops.	Heating contactor Kr failure (always closed).	Toggle heat on and off. Refer to ACCESS MAINTENANCE SCREENSS **Actuation of Power Outlets** (Kr1 function).
				Turn off oven and check: • heating contactor Kr contacts (should be open). • heating contactor Kr coil (should be open).
				Check contactor Kr coil.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
				If items listed above are OK, replace output control assembly.
E72	Electronics at over 167 °F (**RED** error screen).	Cooking stops.	See error E30.	See error E30.
E73	Detergent pump faulty or on permanently (**RED** error screen).	Cooking stops.	**Pump is on when a cleaning cycle is not running.**	
			Relay card is stuck on or detection electronics not working.	Check if the pump is running all the time after the oven is turned on. If so replace the FastPad relay card.
			Open circuit.	
			Relay card is stuck on or detection electronics not working.	Check if the pump is running all the time after the oven is turned on. If so, replace the FastPad relay card.
			Pump working.	
			Pump badly connected.	Check the connections for Phase and Neutral to the pump.  **Fig. 163**
i81	Water flow problem.	Cooking will be degraded.	Fuse F1 open.	Output control assembly relay board output 24. If shorted to ground, check: • Connecting wiring. • valve Yv solenoid.
				Output control assembly relay board output 25. If shorted to ground, check: • Connecting wiring. • Fuse F8. • Vent motor Mo.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
				Output control assembly relay board output 27. If shorted to ground, check: • connecting wiring. • valve Yn solenoid.
				Output control assembly relay board output 29. If shorted to ground, check: • Connecting wiring. • Detergent pump thermal overload switch FPdn. • Detergent pump Pdn.
				Output control assembly relay board output 30. If shorted to ground check: • Connecting wiring. • valve Yc solenoid.
				If output control assembly relay board outs are OK, replace output control assembly.
			Fuse F4 open.	Output control assembly relay board output 9. If shorted to ground check: • Connecting wiring. • Valve Yf solenoid.
				Output control assembly relay board output 10. If shorted to ground check: • Connecting wiring. • Valve Yi solenoid.
				If output control assembly relay board outs are OK, replace output control assembly.
			Water supply problem.	Check the water supply to the unit: minimum flow 5 liters/minute and minimum pressure 1.5 bars. Check that the filter isn't clogged and the state of the pressure limiter. Check the state of the flow limiters.
			Solenoid has failed.	Check solenoids Yi, Yf, and Yn S10, S30 and S27 from the output activation screen in (TECH parameters). Measure the volume of water recovered in 1 minute.
			Flow meter inoperative.	Check flow meter operation. Refer to DIAGNOSTIC SCREENS **Activation of Hydraulics** screen. Activate Yi and check BDS. flow rate.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
E82	Solenoid leaking (**RED** error screen).	Cooking stops.	Valve(s) leaking.	Check Yi (injection valve), Yf (cooling valve), and Yn (cleaning valve), for leakage.
				Check valve operation. Refer to DIAGNOSTIC SCREENS **Activation of Hydraulics** screen. Activate Yf, Yi, Yf, and Pdn (Yn) and check valve activation.
			Flow meter inoperative.	Check flow meter operation. Refer to DIAGNOSTIC SCREENS **Activation of Hydraulics** screen. Activate Yi and check BDS. flow rate.
			Output control assembly relay board.	Check: • Output control assembly fuse F1. • Output control assembly relay board output 9 (Yc). • Output control assembly relay board output 10 (Yi). • Output control assembly relay board output 27 (Yn). • Output control assembly relay board output 30 (Yf).
i83	Water treatment capacity reached 0.	Risk of damaging the oven.	The capacity of the water treatment system has been reached or exceeded.	The water treatment system meter has reached OL. Check the water treatment system and replace/ recharge if required, then reset the meter in customer settings.
i84	Number of maintenance days at 0.	Risk of damaging the oven.	The countdown to the next service has been reached and exceeded.	Carry out planned preventative maintenance operations, then reset the counter within installation parameters.
i97	Connectivity error.	Connectivity not working.	Identification data incorrect (the data contained in the GATEWAY configuration doesn't match the data on the screen.	If GATEWAY was previously configured on another oven: • Follow GATEWAY configuration procedure and scan the QR code which corresponds to oven. • If screen was changed, fill in oven's technical data.
i98	Connectivity error.	No consequence.	Connected appliance: technical parameters cannot be changed.	Pop-up will simply inform technician why parameters can't be changed.

ERROR CODE	MESSAGE ON SCREEN	CONSEQUENCES	PROBABLE CAUSE	POSSIBLE SOLUTION
QOS For a QOS <80% see error E46.	Electronic communication fault (Bus RS485) (**RED** error screen).	**NOTE:** Cooking possible with reduced functionality at up to 347 °F. Cooking stops.	Loss of communication between the output control assembly and touch screen / display assembly.	Check communication LEDs on output control assembly and touch screen / display assembly. Check / replace Ethernet cable.
Service Planned or Required Error	"Service Planned" or "Service Required"	Refer to Operator Manual page 16 for information for Operators. Refer to Installation Manual page 12.	Number of days oven in use or during installation set-up.	• Service auto prompt message is defined by the calculation of the two installation parameters “Service every” / “hours/day”. • Default value is 1500 and 8. • First message appears after 180 days (when only remaining 7 days). • When installing machine, installer can set different values to increase time before message appears. **NOTE:** Example Settings: 5000 / 1 => 5000 days before message appears. 13 years (or 1500 / 1 => 4 years; 1500 / 2 => 2 years; 1500 / 4 => 1 year) **NOTICE** For units already in the field, these two parameters must be changed if the customer doesn’t want a message appearing and associated service call for years.

TROUBLESHOOTING - GAS COMPONENTS

⚠ WARNING

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

⚠ WARNING

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

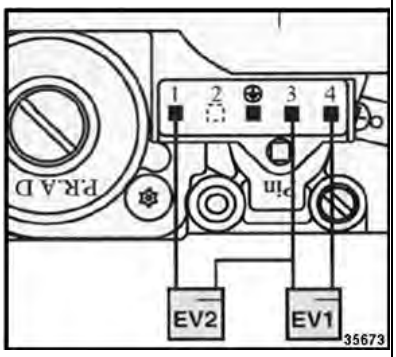
NOTICE

Perform a software update before replacing any parts.

Issue	Probable Causes	Action
Burner does not light.	Software not updated.	Check for new software and the potential need to update unit in the field **PRIOR** to any part change.

	Combustion fan not working.	Ensure the fan is powered.
		• Check voltage on the power supply terminals -3-point terminal block).
		  • Verify polarity from 120 supply to unit.
		  • If powered but not spinning, change the fan.
		  • If not powered, check the 120V power supply chain (connections, contactor, transformer fuse etc.)

	Ignition not working.	Check the ignition function. • Allow the unit to cycle thru ignition process several times. (No air in line.) • • Disconnect ignition electrode wire and activate output “18” of the power card from the technician menu. A spark at the igniter outlet should be seen. If not, check the 230V voltage on output 18. If there’s no voltage, check the 230V electrical circuit. • Check for wall outlet 120v polarity ensuring neutral and hot wires are not reversed. E67 could also be displayed in error log.
	No gas, or gas flow/pressure too low.	• Verify gas is present at gas valve. • Allow the unit to cycle thru ignition process several times. (no air in the line) • Check gas pressure with manometer. • Check with combustion analyzer the CO measurement to be less than 150. And then the CO2% is set correctly based on gas type.

Issue	Probable Causes	Action
	Gas valve not working.	Check resistance of coils Ev1 and Ev2, GAS VALVE RESISTANCE. • For values other than 0, verify gas pressure at valve inlet is correct when the burner is ignited. If the burner does not ignite, the valve has malfuctioned. • If the value is 0, the valve has malfuctioned.  **Fig. 164**
	Ionization electrode does not detect flame.	Check ELECTRODES (GAS BURNER). (adjustment, connection, wires)
	Flame ignition module not working.	At the end of the ignition sequence. Cut the gas supply, start cooking. • If the oven shows “Gas error”, the flame ignition module is working, check other components. • If there is no error message, the flame ignition module has malfuctioned.
Burner makes a detonation at ignition.	Ignition spark fault. The electrode is adjusted incorrectly.	Check ELECTRODES (GAS BURNER). **NOTE:** Insulation of the earth wires (parasitic sparks), ensure that the electrode soapstone is not broken.
Burner makes a humming noise.	Problem with air supply.	Check that the air inlet tube is connected correctly to the venturi inlet. Ensure that that the tube’s air inlet is not blocked.
	Incorrect valve setting.	Check CO2 level. Refer to: ADJUST GAS VALVE
	Incorrect oven settings. (model, gas type)	Check the technician parameters (oven configuration).

Issue	Probable Causes	Action
	Incorrect gas type supplied to the oven.	Verify gas type supplied to oven complies with serial number plate. If not, refer to: CHANGE TYPE OF GAS SUPPLY.
	Silicone tube connecting venturi/ valve disconnected or defective.	Reconnect or change silicone tube.
Burner emits an intermittent whistle.	When burner first lights, especially when cold, it may make a slight hissing noise for a few seconds.	This is not a malfunction. Will quickly disappear when burner heats up.
Burner pollutes.	Incorrect gas valve setting.	Check the CO2 level. Refer to: ADJUST GAS VALVE
	Incorrect gas type supplied to oven.	Verify gas type supplied to oven complies with serial number plate. If not, refer to: CHANGE TYPE OF GAS SUPPLY.
	Incorrect gas type setting.	Check gas type in the technical parameters. Refer to: CHANGE TYPE OF GAS SUPPLY
Combustion blower motor operates at high speed.	FastPAD 2 power and relay assembly has stopped communicating with the burner control card.	Check LEDs on gas card. • If LEDs are off, check Ethernet cable and replace if necessary or replace gas card. • If LEDs are lit or flashing on the gas card, check electrical connection (wires and terminal tightening) from gas card to fan.
Ignition firing continuously.	The flame does not stay lit.	• Check for wall outlet 120v polarity ensuring neutral and hot wires are not reversed. E67 could also be displayed in error log. • Power and gas card connection fault. • Verify wires and terminals are tight. • Gas card/FastPAD power and gas card link fault. • Verify LEDs on gas card. • If LEDs are off, check the Ethernet cable and replace it if necessary, • Replace gas card.
The burner only operates at low power.	Combustion fan remains at low speed.	• Gas card incorrectly configured, verify position of the switches on the gas card. Refer to: OUTPUT CONTROL ASSEMBLY .

COMPONENT LOCATION

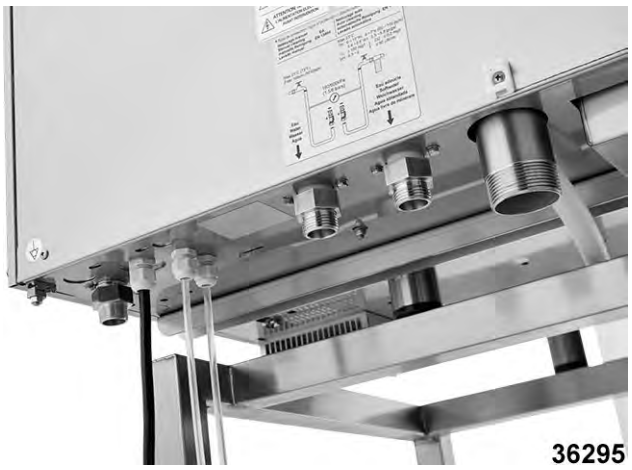
TECHNICAL COMPONENTS

Fig. 165

Item	Components
1	Solenoid valve Motor

Item	Components
2	Flo Meter Solenoid Cleaning and Descaling Pump Temperature Probe Vent Valve Motor Contactors Boards
3	Control Board Coder
4 **NOTE:** Behind ventilation duct	Fan Motor Shaft Seal
5 **NOTE:** In the door.	LED Strip Closing Mechanism Internal Glass USB Product Probe

Sprayer



Utility Connection

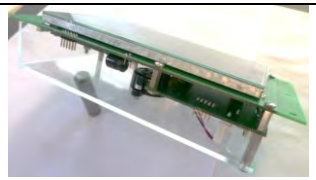
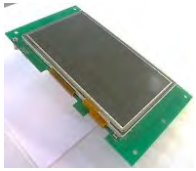
USB Connection

GUIDE DE DEPANNAGE RAPIDE ELECTRONIQUE

Four combi

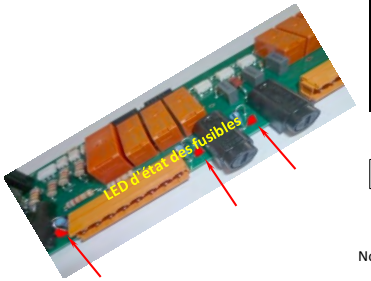
Avant d'utiliser ce guide, il faut que le diagnostic de la panne soit fait et qu'on ait déterminé que le problème ne vient pas d'un composant électromécanique mais d'un dysfonctionnement de l'électronique
Ce guide définit les modules électroniques à remplacer en fonction des pannes rencontrées pour limiter les coûts SAV

4 ensembles électroniques pour couvrir les besoins en SAV

Dans 80% des cas de panne de l'ensemble de puissance, il suffit de changer la barrette relais	Dans seulement 20% des cas, il est nécessaire de changer l'ensemble de puissance complet 2 fois plus cher que la barrette relais seule.	8 fois sur 10, il est possible de régler les dysfonctionnements logiciel avec une clé USB	Dans seulement 20% des cas de panne matérielle des interfaces, il est nécessaire de changer l'ensemble interface complet environ 2 fois plus cher que l'écran seul.	Dans 80% des cas de panne matérielle des interfaces, il suffit de changer l'écran
				
Barrette relais maxi FastPad 2 - Code 309663	Ensemble de puissance FastPad 2 maxi - Code 309635	Utiliser une clé USB2 vide, formatée en FAT 32 Capacité maxi. 32 Go	Ensemble interface - Code 309634	Ecran FastPad 2 - Code 309646

Panne matérielle

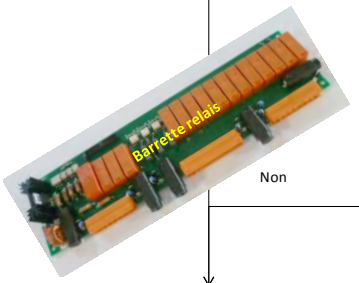
Une sortie de l'ensemble de puissance ne fonctionne pas



Vérifier l'état des LED des fusibles

Non — Une des 5 LED est éteinte? — Oui

Vérifier l'absence de problème électrique en aval de la carte (Court-circuit par ex.), le corriger et changer le fusible



Non — Problème résolu? — Oui

Changer la barrette relais
(La barrette relais mini est à changer par une barrette relais maxi - Cf. Notice de maintenance)

FIN

Panne matérielle

Une entrée de l'ensemble de puissance ne fonctionne pas

Vérifier si le capteur amont est fonctionnel (Sonde de température, débitmètre...)

Non — Capteur fonctionnel ? — Oui

Changer l'ensemble de puissance
ATTENTION: Nécessite la configuration des mini interrupteurs - Cf. Notice de maintenance

Changer le capteur défectueux

Problème logiciel

L'appareil présente des défauts de fonctionnement comme:
=> Le système ne démarre pas
=> Dysfonctionnements aléatoires
=> Difficulté de mise à jour...

2 actions pour dépanner le client immédiatement

REINITIALISER le système:
Dès le démarrage du chargement du programme, manoeuvrer **6 fois** la porte (Action sur l'interrupteur de fermeture) dans les **8 s.**

OU, si échec

Activer du mode dégradé (Mode sec / 175 °C):
Dès le démarrage du chargement du programme, manoeuvrer **3 fois** la porte (Action sur l'interrupteur de fermeture) dans les **8 s.**

Si le problème n'est pas résolu

Non — L'écran est-il utilisable ? — Oui

Effectuer un "RESET" à partir de l'écran Service / Paramètres clients

ATTENTION: La fonction RESET a pour effet de remettre à zéro les mémoires (HACCP, remise des paramètres usine par défaut, effacement des recettes, initialisation des consommations). Les photos ainsi que la configuration de la braisière est conservée.

Si le problème n'est pas résolu

Vérifier l'état des LED de communication entre l'ensemble interface et l'ensemble de puissance
(Cf. Notice de maintenance)

Selon l'état des LED

Changer la carte défecteuse:, soit:
=> l'ensemble interface FastPad 2
=> l'ensemble de puissance FastPad 2
(Cf. Notice de maintenance)

Panne matérielle

L'écran est cassé ou présente des défauts visibles type "Taches noires"....:

Changer la carte écran
(Cf. notice de maintenance)

ATTENTION: Cette "réinitialisation" permet d'effacer toutes les données du processus en cours mais n'affecte pas:
=> Les données client
=> Les données d'installation
=> Les paramètres usines