

# MAC/MAH/DCC/DCB REPLACEMENT INSTRUCTIONS FOR PCB BOARD REPLACEMENT Kit 550003185 SYSTEM MEMORY STICK REPLACEMENT Kit 550003191

PCB Board replacement **ONLY** does not require reprogramming of Boiler parameters. Boiler parameters are maintained with continued use of existing System Memory Stick.

Replacement of the System Memory Stick requires complete Boiler parameter reprogramming.

Kit installation shall be completed by qualified agency.

## ⚠ WARNING

Fire, explosion, asphyxiation and electrical shock hazard. Improper installation could result in death or serious injury. Read these instructions and understand all requirements, including requirements of authority having jurisdiction, before beginning installation. Installation not complete until appliance operation is verified per Installation, Operation & Maintenance Manual provided with boiler.

### PCB Replacement Kit 550003185 Instructions

1. Follow instructions To **TURN OFF GAS TO APPLIANCE** found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off.

## ⚠ WARNING

Electrical shock hazard. Turn OFF electrical power supply at service panel.

2. Remove two (2) screws at bottom of front jacket cover. Lift jacket up and off.

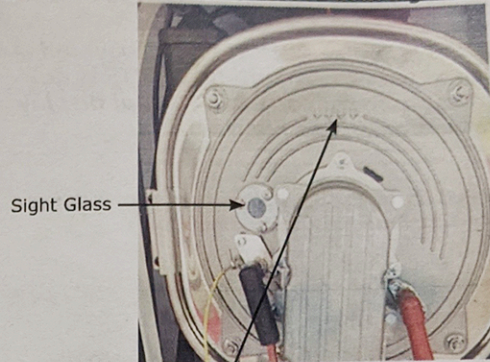
## ⚠ WARNING

Burn hazard. Verify heat exchanger and flame sensor have cooled or use appropriate personal protection equipment before removing flame sensor.

3. Inspect combustion chamber through sight glass. Verify flame is not present. See Figure 1.
4. Press tab and place control panel in downward position. See Figure 2.
5. Remove three (3) screws from back of control panel. See Figure 3.

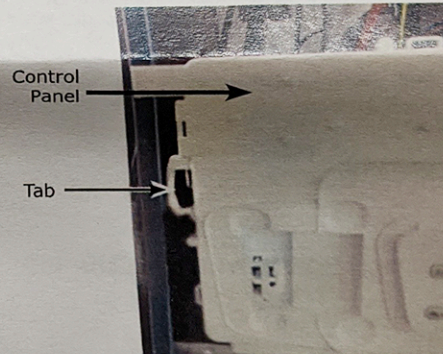
Illustrations are a depiction of the boiler for general location of parts and may vary depending on model.

**Figure 1 - Sight Glass & Heat Exchanger Cover**

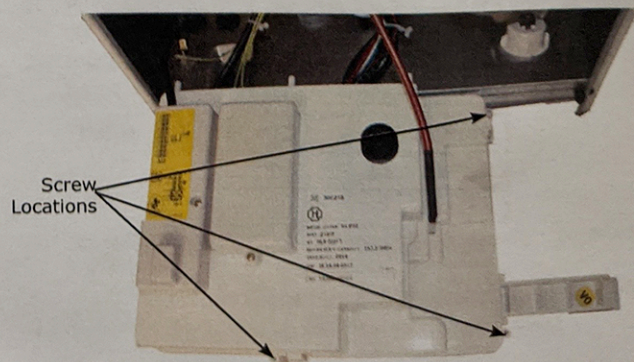


(Location of 165/205 Temp Switch - not shown)

**Figure 2 - Control Panel and Tab**



**Figure 3 - Back of Control Panel**



6. Remove four (4) screws securing PCB Board to Control.

7. Remove all plugs on board. See Figure 4.

8. Remove System memory Stick. ***Do not discard.***

9. Place System Memory Stick onto new PCB board. Ensure System memory stick is in correct position on PCB connector.

**Note** *System Memory Stick (SMS) is beveled for placement recognition. If SMS is not placed on board correctly control display will be blank. See Figure 5.*

10. Install new PCB board into boiler. Secure in place with four (4) screws.

11. Replace all wires in correct locations on board.

12. Replace Control cover and secure with three (3) screws.

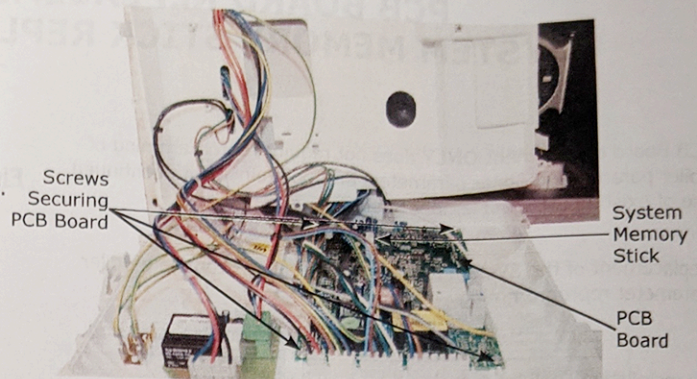
13. ***No parameter changes are needed when replacing the PCB Board only.***

14. Resume operation using OPERATING INSTRUCTIONS found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual.

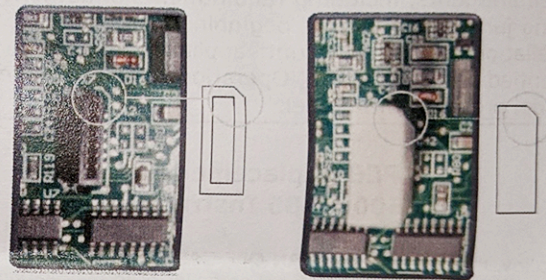
15. *Install front panel. Secure with two screws at bottom of front panel.*

16. *Verify proper operation.*

**Figure 4 - PCB Control Board with Plugs**



**Figure 4 - System Memory Stick Bevel**

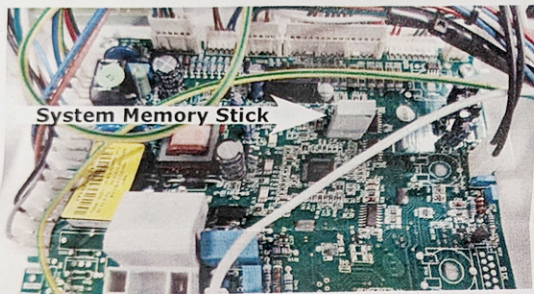


**Note** *System Memory Stick (SMS) is beveled for placement recognition. If SMS is not placed on board correctly control display will be blank.*

Figure 5 - System Memory Stick (SMS)



Figure 6 - System Memory Stick Placement



**Note** System Memory Stick (SMS) is beveled for placement recognition. If SMS is not placed on board correctly control display will be blank.

### SYSTEM MEMORY STICK (SMS) REPLACEMENT KIT 550003191 INSTRUCTIONS

1. Follow all safety precautions as listed on page 1.
2. Follow instructions To TURN OFF GAS TO APPLIANCE found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off

#### ⚠ WARNING

Electrical shock hazard. Turn OFF electrical power supply at service panel.

3. Remove two (2) screws at bottom of front jacket cover. Lift jacket up and off.
4. Turn gas and power off to boiler.
5. Remove two (2) screws at bottom of front jacket cover. Lift jacket up and off.

#### ⚠ WARNING

Burn hazard. Verify heat exchanger and flame sensor have cooled or use appropriate personal protection equipment before removing flame sensor.

6. Inspect combustion chamber through sight glass. Verify flame is not present. See Figure 1.
7. Press tab and place control panel in downward position. See Figure 2.
8. Remove three (3) screws from back of control panel. See Figure 3.
9. Remove System Memory Stick (SMS). See Figure 6.
10. Replace with new System Memory Stick (SMS). Verify position of SMS card on connector is seated correctly. Match shape printed on PCB board to SMS. See Figures 4 and 6.
11. Install front panel. Secure with two screws at bottom of front panel.

### REPROGRAMMING SYSTEM AFTER SMS REPLACEMENT

If display shows E55 press button for two (2) seconds. Second message of display will be E55/E53 (not calibrated/setting pcb); proceed as follows **before** calibrating the boiler.

1. Press together for 6 seconds the and buttons. Display shows "P01" alternating with (00);
2. Press and buttons to scroll parameter list until parameter P02. Verify value in the following Table 1:

Table 1

P02	Gas Type
0	Natural Gas
1	LP

3. Press the button to edit selected parameter; (parameter blinks);
4. Press the and buttons to modify the parameter value;
5. Press the button to save the parameter value;

6. Press the **+** and **-** buttons to scroll the parameter list until parameter **P03**. Verify value in the following Table 2:

P03	Hydraulic System
0	Instantaneous combi
3	Instantaneous preheat (3 stelle)
5	External tank
8	CH only

7. To change value use instructions from **3 to 5**;  
 8. If using Outdoor Reset Sensor and **NOT** using the default curve, press **+** and **-** buttons to scroll parameter list until parameter **P06**. Verify value in the following Table 3:

P06	Outdoor Temp Sensor
00	With an outdoor temperature sensor connected, the external temperature value has influence to calculate the heating flow temperature setpoint
01	With an outdoor temperature sensor connected, the display shows the external temperature value (no influence)

9. To change value to appropriate curve use instructions from **3 to 5**.  
 10. Press **+** and **-** buttons to scroll parameter list until parameter **P09**. Verify value in the following Table 4:

P09	Hydraulic Block
1	Brass

11. To change value use instructions from **3 to 5**.  
 12. Press **+** and **-** buttons to scroll parameter list until list until parameter **P22**;  
 13. Press **i/p** button to edit selected parameter and set **P22 = 22**;  
 14. Press **i/p** button to save the parameter value;  
 15. Press **+** and **-** buttons to scroll parameter list until parameter **P73**;  
 16. Press **i/p** button to edit selected parameter;  
 17. Set number of the corresponding power of boiler. See Table 5; (power value is printed on serial number plate)

P73	Power (kW) (Central heating - Domestic Hot water)	P13 (%Central Heating)	P14 (%Domestic Hot water)
3	32/40 (SS)	80	100
10	33 (SS)	100	100

18. Press **+** and **-** buttons to modify the parameter value;  
 19. Press **i/p** button to save the parameter value;  
 20. Press **o/r** button to exit.  
 21. After setting the boiler proceed with calibration function. Verify CO2 level shall be done with a calibrated combustion analyzer.

## 22. Perform Automatic Calibration Function:

Note

**Boiler must not shutoff during calibration. Open all heating zones in heating or DHW mode to ensure boiler does not shutoff.**

Before performing this function verify there are no heat demands in progress.

During this function ensure there is maximum heat exchange to the system in Heating or DHW mode (DHW request) to avoid boiler shutting off due to overheating.

Press **o/r** and **i/p** together and hold for about 6 seconds. When display indicates "On" press **i/p** within 3 seconds after pressing previous buttons.

### NOTICE

**Important:** If display indicates "303" Automatic Calibration function has not been activated. Disconnect boiler from main power supply for few seconds and repeat procedure.

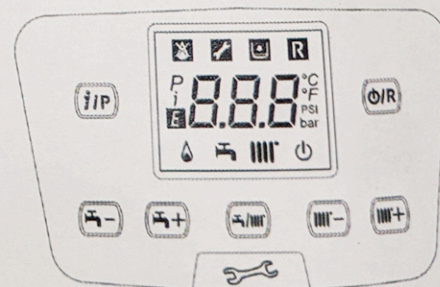
- When function is enabled, **o/r** and **||||** will flash on the display.
- After ignition sequence, which can also take place after few attempts, boiler performs three operations. Each operation lasts about 1 minute:
  - maximum power
  - ignition power
  - minimum power
- Before moving to the following phase, from maximum power to ignition power and then to minimum power. **P** and **o/r** appear on the display.
- During this phase, power level reached by boiler and delivery temperature alternate on the display.
- When **o/r**, **o/r** and **||||** flash together on the display, calibration function has terminated.
- Press **o/r** to exit the function. Display will show **ESC**.

23. Resume operation using OPERATING INSTRUCTIONS found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual.

24. Install front panel. Secure with two screws at bottom of front panel.

25. Verify proper operation.

### Figure 7 - Control Cover



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