

Installing a Fast Oven Upgrade Kit

Agilent 6850 Series II Network GC System Accessory G3350B

There are three Fast Oven upgrade kits: 120 V, 200 V, and 230 V. The following table indicates what each kit contains:

Description	Quantity	120 V kit	200 V kit	230 V kit
T-20 Torx® screws, M4 x 8 mm	4	✓	✓	✓
Hex nuts with lockwashers, M4 x 0.7 3.2 mm	2	✓	✓	✓
20 A AC board	1	✓	✓	✓
Voltage label	1	✓	✓	✓
Disposable wrist strap	1	✓	✓	✓
Power cord	1	✓	✓	✓
Installation sheet (this document)	1	✓	✓	✓
Oven heater shroud	1	✓		
Line voltage configuration plug	1		✓	

The kits are factory-assembled. Do not disassemble them during installation.

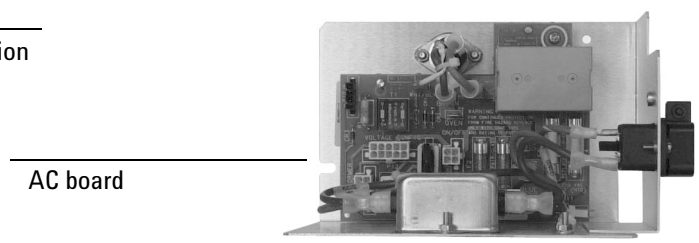
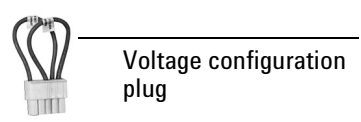
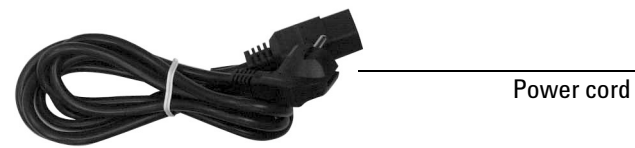
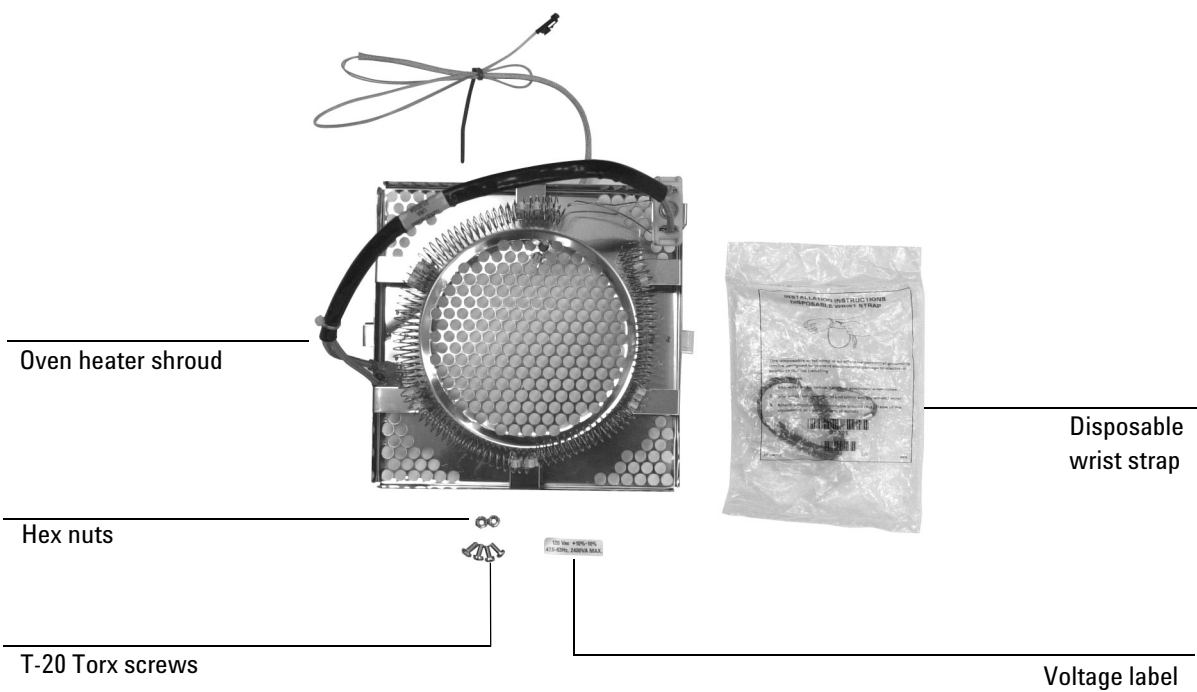
Note: These kits can only be installed on 6850 Series II GCs (serial number 43-10413001 or later). The serial number appears on the outside left panel of the GC.



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Installing a Fast Oven Upgrade Kit
Parts identification

Parts identification



Required tools

- T-20 Torx screwdriver
- Open-end wrench
- Needle-nose pliers

Overview

Caution

Before starting, review the safety information listed at the end of this document.

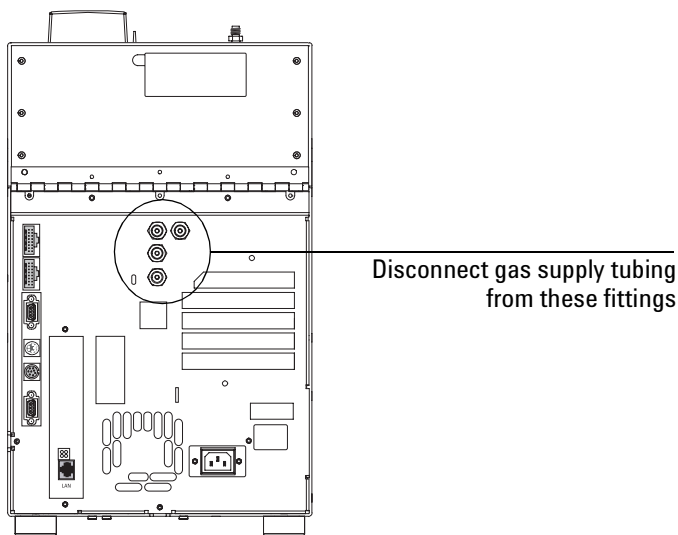
1. Disconnect the GC.
2. Remove the back panel.
3. Replace the AC board.
4. **120 V kit only.** Replace the oven heater shroud.
5. Place the voltage label.
6. Restore the GC to operating condition.

Disconnect the GC

WARNING

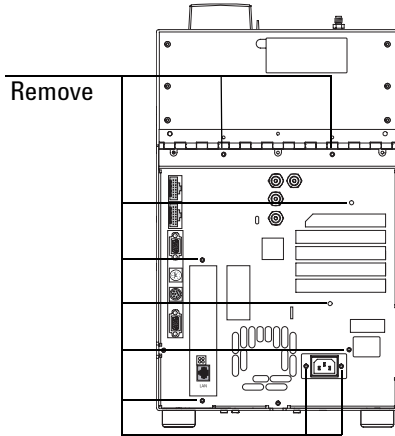
Hydrogen gas is flammable and potentially explosive. Before replacing the flow module, turn off the hydrogen gas at the source.

1. Turn off the GC and unplug the power cord. Allow time for all heated zones to cool.
2. Open the lid. If a column is installed, disconnect it at the detector end. Remove the nut warmer, insulation, and capillary adapter, if present. Close the lid.
3. Turn all gases off at their sources. Disconnect the carrier and detector gas tubing from the back panel of the GC.



Remove the back panel

Remove the nine T-20 Torx screws on the back panel. Then, tilt the top of the panel away from the GC.



Replace the AC board

The fast oven is powered by a new AC board that comes with the kit.

Remove the old board

Caution

Use electrostatic discharge precautions while replacing the AC board.

Remove the nut
located here

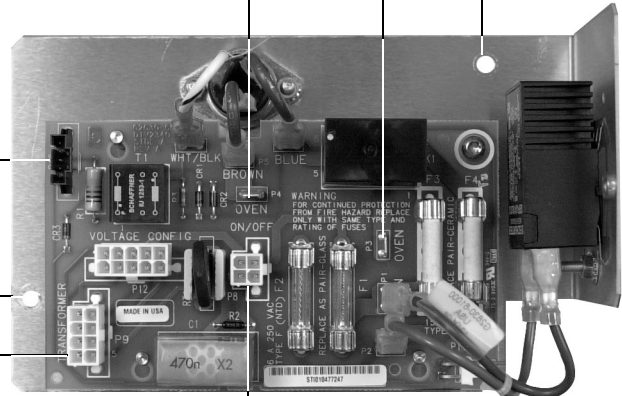
Oven heater spade lugs
(P3 & P4)

Flap/AC cable (P10)

Loosen the nut located here

Transformer cable (P9)

Power switch cable (P8)



1. Disconnect the two oven heater spade lugs (P3 and P4).
2. Disconnect the power switch cable (P8).
3. Disconnect the transformer cable (P9).
4. Remove the flap/AC cable (P10).
5. Loosen the nut in the position indicated above on the AC board bracket.
6. Remove the nut in the position indicated above on the AC board bracket.
7. Remove the PRT (sensor) connector on the main board.
8. Cut the tie wrap under the lid.
9. Slide the AC board assembly from the GC chassis.

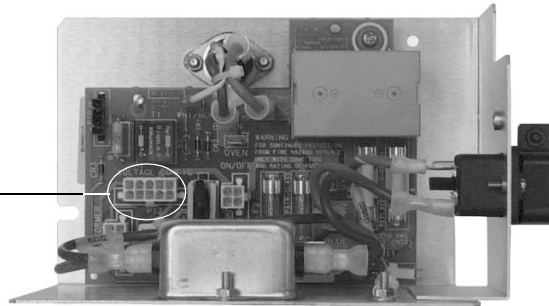
10. For 120 V and 230 V AC boards, remove the line voltage configuration plug (P12) from the old AC board and insert it into the new board.

For 200 V AC boards, insert the line voltage configuration plug that comes with the kit into the new board.



Voltage configuration
plug

Insert here

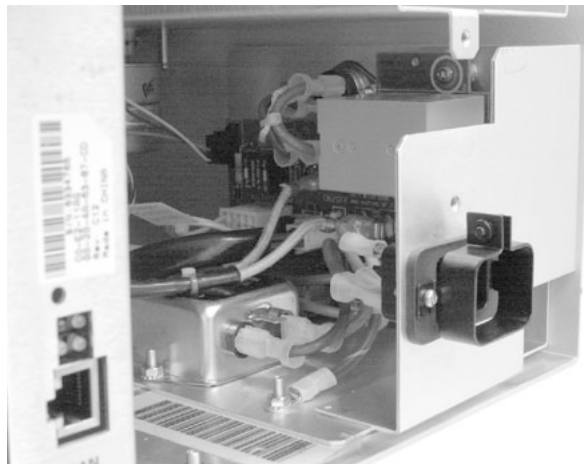


Install the new board

Caution

If the voltage configuration is not set correctly on the new AC board, or if incorrect fuses are installed, your GC can be damaged.

1. Slide the new AC board assembly into the chassis and over the studs. Install the top nut on the AC board bracket onto its threaded stud.
2. Tighten the remaining nut on the AC board bracket.



Replace the oven heater shroud - 120 V kit only

The 120 V kit comes with an oven heater shroud. You must replace it with the shroud currently in the GC. However, if you are using the cryogenic oven cooling feature, you must remove it before you can replace the shroud.

Remove the cryogenic oven cooling feature

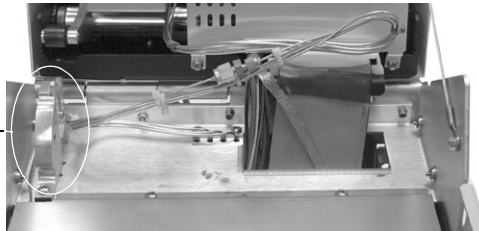
If applicable, remove the cryogenic oven cooling feature. See its documentation for details.

Remove the old shroud

Caution

Before opening the lid, check behind it to make sure the area is clear of obstructions.

1. Open the lid and locate the counterbalance cam in the left rear corner under the lid. Keeping the lid open with one hand, loosen the screw on the right side of the cam and lower the stop plate (on the right side of the counterbalance cam).



Counterbalance cam

2. Raise the lid until it is stopped by the safety cable.
3. Raise the stop plate and tighten the screw to lock the lid in the upright service position.

WARNING

The lid is heavy. Always lock the lid when it is in the service position.

4. Remove the two T-20 Torx screws loosen the two 7-mm nuts.
5. Slide the electronics cover off the GC.

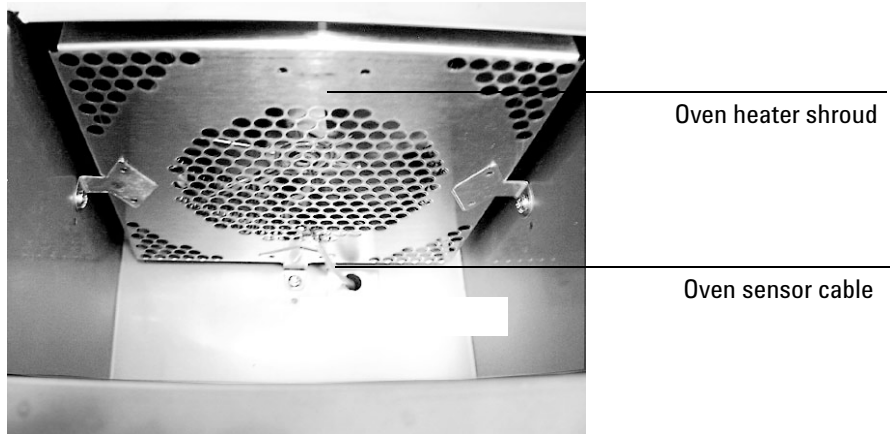
Caution

Be careful not to pull the metal contacts off of the switch when disconnecting the wires.

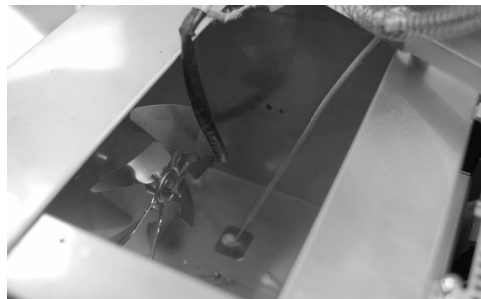
6. Remove the LAN board, if present.

Installing a Fast Oven Upgrade Kit
Replace the oven heater shroud - 120 V kit only

7. Remove the three T-20 Torx screws securing the oven heater shroud in the oven.



8. Feed the PRT sensor cable up through the hole in the bottom of the oven. Then, remove the extra insulation and save it.
9. Move the shroud forward and clear of its position. At the same time, feed the oven heater wires out through the hole in the back of the oven and the PRT sensor cable out through the hole in the bottom of the oven. These same wires will be used to install the new oven shroud. Remove any extra insulation from the wires and save it.



Install the new shroud

1. Feed the oven heater wires used with the previous shroud in through the back of the oven, then place the new shroud in the oven.
2. Secure the shroud using three chrome-plated T-20 Torx screws.
3. Replace the insulation on the oven heater wires and the heater/sensor cable.
4. Feed the PRT sensor cable down into the hole in the bottom of the oven.
5. Connect the sensor cable to the main board (at P7) and connect the two oven heater wire spade lugs to the AC board (at P3 and P4).
6. Replace the three T-20 Torx screws securing the oven heater shroud in the oven.
7. Reinstall the LAN board, if present.
8. Put the electronics cover back on the GC.
9. Put the two T-20 Torx screws back on and tighten the two 7-mm nuts.
10. Move the lid to the normal open position and slide the stop plate all the way up into position behind the roller. Tighten the stop plate screw.

Reinstall the cryogenic oven cooling feature

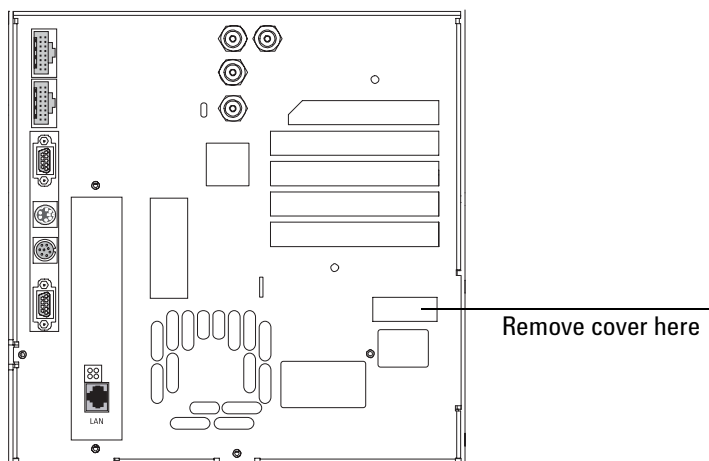
If applicable, reinstall the cryogenic oven cooling feature that you removed prior to changing the shroud. See its documentation for details.

Installing a Fast Oven Upgrade Kit
Place the voltage label

Place the voltage label

To place the voltage label:

1. With needle-nose pliers, remove the cover of the area above the low voltage power plug.



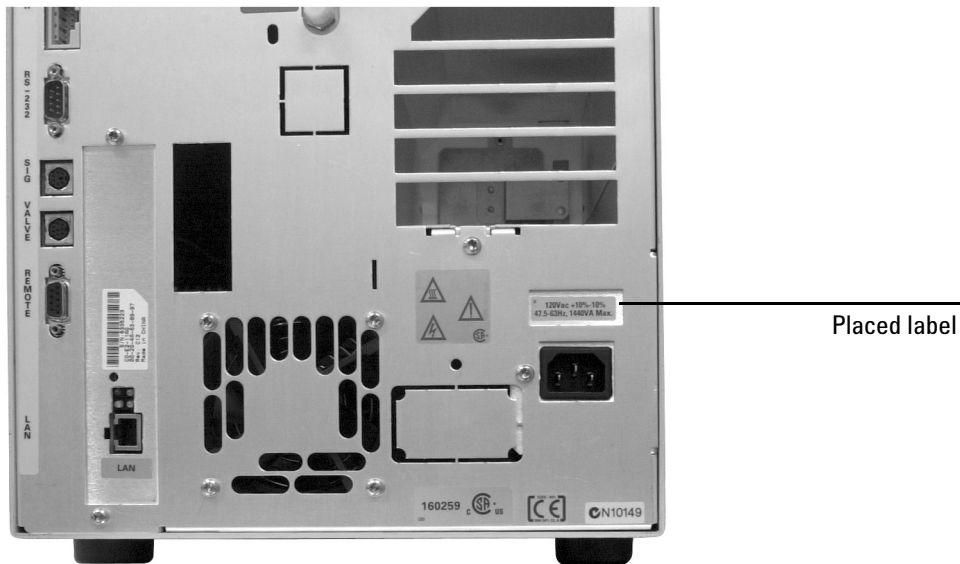
2. Replace the back panel.
3. Place the label in the hole created by step 1.

Example label:

230 Vac + 10%-10%
47.5-63Hz, 2000VA Max.

Installing a Fast Oven Upgrade Kit Restore the GC to operating condition

The result is that the label is on the AC board bracket, but you can see it through the hole in the back panel.



Restore the GC to operating condition

1. Install the capillary adapter, if used.
2. Restore the column connection.
3. Restore carrier and other gases to the GC.
4. Restore power.
5. Apply your normal operating pressures. Leak-check the manifold, back panel, and column fittings.



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Safety Symbols

Warnings in the manual or on the instrument must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions violates safety standards of design and the intended use of the instrument. Agilent Technologies assumes no liability for the customer's failure to comply with these requirements.

In the manual

A warning calls attention to a condition or possible situation that could cause injury to the user.

A caution calls attention to a condition or possible situation that could damage or destroy the product or the user's work.

On the instrument



See accompanying instructions for more information.



Indicates a hot surface.



Indicates hazardous voltages.



Indicates earth (ground) terminal.



Indicates explosion hazard.



Indicates radioactivity hazard.



Indicates electrostatic discharge hazard.



Indicates pinch hazard.



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