P-270B Safety Ignition Module (SIM) Replacement Kit Instructions

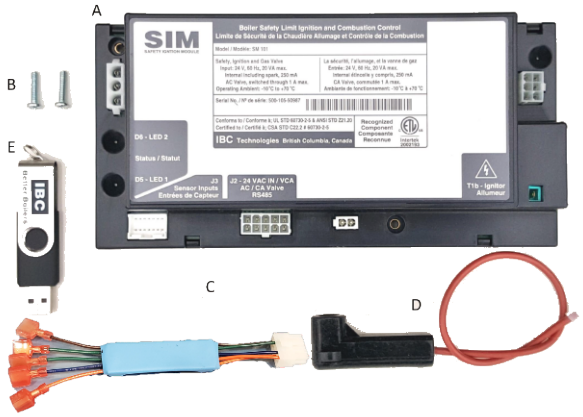
IBC Part #	Description	Boiler Model
P-270B	Safety Ignition Module (SIM) This SIM kit can replace an IBC Fenwal Ignition module, a Capable Controls module, or an existing SIM.	SL Series 'G1' (SL 115, SL 160, SL 175, SL 199, SL 260, and SL 399) SL Series G2 SL 399 G3, SL 260 G3

Warning

This kit must be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit.

Kit contents:

A. SIM module (backwards compatible mode)
B. 2 x screws - 6-32 x 5/8"
C. SIM adapter cable
D. PTS-VFC SIM ignition cable
E. USB stick with the latest software update



Replacing a SIM in the SL 'G1' and G2 series boilers

> **Note**
>
> For increased reliability, we recommend that you replace the electrode/flame sensing rod when you replace the SIM (purchased separately). It is possible to reuse ignitors with low running hours.

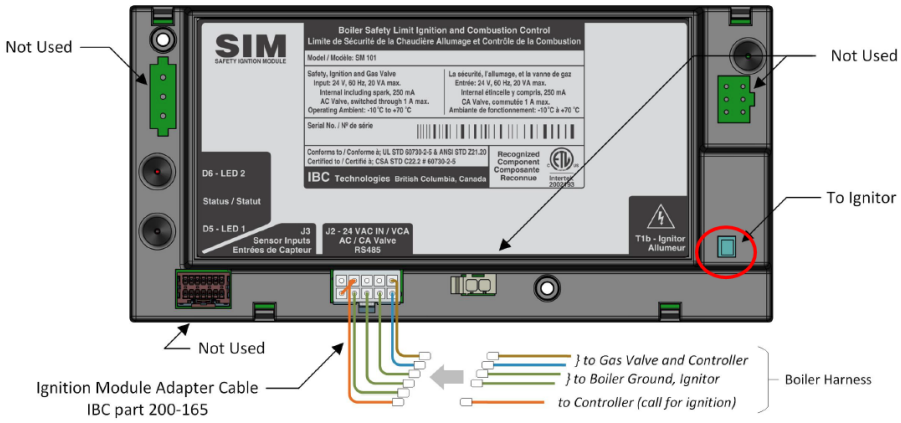


Figure 1 *SIM connections - SL G1 and G2 series boilers*

You do not need to use the supplied USB software update for these models. However, the update provides the latest features and improvements. Note that you cannot update the 5-button control boards with a USB.

1. Disconnect the power to the boiler, and close the gas shut-off valve.

   If replacing an existing SIM, all the module's connector plugs, except the ignition lead, have retaining clips.

2. Note the position of the retaining clips for each plug.

   To unplug the connectors, you must press down on the retaining clips and then properly release them.

3. Unplug the connectors from the module. If replacing a Fenwal or Capable Controls Ignition module, disconnect the wires one by one. If necessary, use needle-nose pliers to grip the wire terminals.
4. Check that the wire connections are still solid and secure.
5. To remove the existing module, hold it firmly in place as you unscrew the two mounting screws. Retain the screws.
6. Position the new module, so that the mounting holes align.
7. Insert the screws, and lightly tighten to secure the module in place. Do not over-tighten.
8. Replace the original ignitor cable with the SIM ignitor cable provided, and run it to the ignitor tab on the SIM (see image above).
9. Leaving the gas off, restore power to the boiler.

10. If the ignitor was replaced, pressurize the combustion chamber for a leak test around the ignitor gasket with an approved leak test solution:
    - Remove any call for heat.
    - From the **Main Menu**, go to **Diagnostics** > **Fan Operation**.
    - Press the **Vent Test On/Off** button to drive the fan into high speed.
    - When complete, press On/Off again, and wipe off the excess solution.
11. Leaving the gas off, initiate a call for heat. Look through the sight glass to see that the spark is present during the ignition trial.
12. If the spark looks bright and stable, turn on the gas and allow the boiler to go through another trial for ignition. It should light off smoothly and quietly.

Replacing a SIM in the SL G3 series boilers

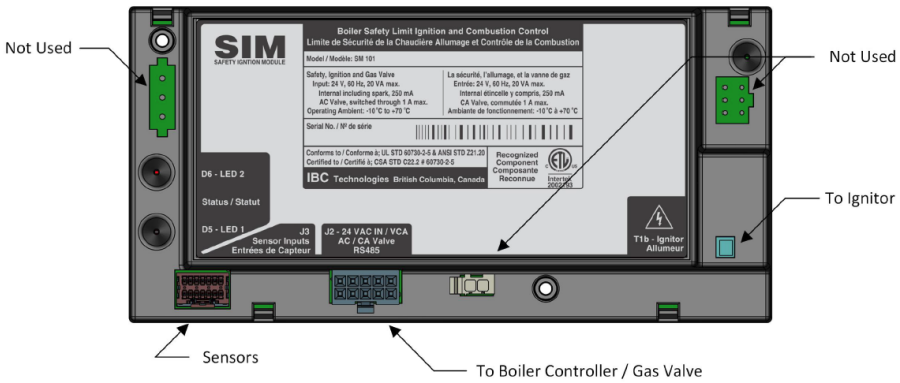


Figure 2 *SIM connections - SL 26-260 G3, SL 40-399 G3 series boilers*

1. Disconnect the power to the boiler and close the gas shut-off valve.

   All the module's connector plugs, except the ignition lead, have retaining clips.
2. Note the position of the retaining clips for each plug. To unplug the connectors, you must press down on the retaining clips and then properly release them.
3. Unplug all the connectors from the module.
4. Check that the wire connections are still solid and secure.
5. To remove the existing module, hold it firmly in place as you unscrew the two mounting screws. Keep the screws.
6. Position the new module, so that the mounting holes align.

7. Insert the screws and lightly tighten to secure the module in place.
8. Plug the connectors into their respective sockets (see image above), ensuring that the retaining clips click into place properly. Each wire connector plug should fit snugly into a socket.
9. Plug connectors into their respective sockets, ensuring that the retaining clips click into place properly.

   Each wiring connector should fit snugly into a socket.

   Note that the Ignition Module adapter cable (included in this kit) is not used on G3 Series boilers, and can be discarded. Similarly, a G3 will already have a SIM ignition cable, so the ignition cable provided with this kit can be set aside as a spare part.
10. Leaving the gas off, restore power to the boiler.
11. If the ignitor was replaced, pressurize the combustion chamber for a leak test around the ignitor gasket with an approved leak test solution. To do this:
    - » Remove any call for heat.
    - » From the **Main Menu**, go to **Diagnostics** > **Fan Operation**.
    - » Press the **Vent Test On/Off** button to drive the fan into high speed.
    - » When complete, press On/Off again, and wipe off the excess solution.
12. Leaving the gas off, initiate a call for heat.
13. Look through the sight glass to check that a spark is present during the ignition trial.
14. If the spark looks bright and stable, turn on the gas and allow the boiler to go through another trial for ignition. It should light off smoothly and quietly.