

SafeChurch The Hidden Danger Lurking in Your **Electrical Box**

A Quick Check of Your Circuit Breaker Panel Can Shed New Light on Your Electrical Hazard Exposure

If your home or business was built between 1950 and 1985, it is possible that you have a Federal Pacific Electric Stab-Lok® breaker panel. Although this company is no longer in business, many of these Stab-Lok panels still exist in basements and electrical rooms.



This is a Stab-Lok panel showing the shape and color of Stab-Lok breakers. The handle shape and color are somewhat unique to Stab-Lok breakers.

The Stab-Lok panels are associated with several problems related to the breakers not tripping and issues with internal connections on the busbars.

The Consumer Product Safety Commission looked into many problems in 1982 with these breakers not tripping properly according to UL testing requirements.





This is a close up view of a 20 ampere double-pole Stab-Lok breaker showing the handle shape and color.

Tests performed by the Consumer Product Safety Commission, and independent consulting engineers, concluded that certain *Stab-Lok* breakers do not trip according to requirements and in some cases can jam in the "on" position. This condition was most pronounced in the *Stab-Lok* two-pole version of the breakers.



This is a failed, high-resistance, busbar connection inside a 200 ampere Stab-Lok panel. The arced-away steel screw holds the copper bar in the forefront to the aluminum bar in the background.

Unfortunately, this information surfaced after many *Stab-Lok* installations were completed and had been in service for years. The purpose of the breaker is to prevent the wiring from overheating and causing a fire in the building when there is a short circuit or when someone plugs too many cords into one receptacle.



This is a label on the door of a panel made by Federal Pacific Electric.

In 2002, a New Jersey class-action lawsuit decided that the manufacturer of the *Stab-Lok* breakers committed fraud over many years when they issued UL labels to their products.

They did this knowing that the breakers did not meet testing requirements at the time. The <u>National Electrical Code</u> requires that all installed electrical products be listed and labeled by an independent testing agency such as UL.

Due to the fraudulent testing, the original *Stab-Lok* panelboards and breakers were never really verified that they were suitable for the intended use.



The dark-colored metal parts on the left side of the panel indicate overheating at points where the breakers connect to busbars. The light-colored metal parts on the right side of the panel appear to not have overheating discoloration.

A licensed electrical contractor should confirm whether Federal Pacific Electric *Stab-Lok* breakers and panelboards are currently in use.

Based on these issues, when a <u>Federal Pacific Electric Stab-Lok</u> installation is discovered, the safest course of action is to replace it with a completely new panelboard and breaker installation.

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