

Federal Pacific Breakers

Federal Pacific Electric panels were manufactured between the 1950's-70's, however they no longer meet federal safety requirements.

What does that mean, and how did it happen?



This photo came from a service call that one of our electricians checked out back in 2013. The breaker failed to trip, causing the outlet to burn up. The client had a Federal Pacific Electric (FPE) service panel and breakers.

FPE breakers are known to have up to a 60-70% failure-to-trip rate.

When you have a power surge or overload of any type, the breaker is designed to prevent further damage to your circuits by turning off, or “tripping.” In most cases, if it was a minor temporary surge, you can simply reset your breaker by turning it all the way off and then on again.

When it doesn't trip when it's supposed to (fails to trip), the surge causes damage to anything connected to it – wires, fixtures, appliances, etc. In some cases, it can and has caused damage to entire homes.

When breakers fail to trip, surges and overheating go right through to the device, which can cause burnouts like this.

Sometimes it will burn up the breaker itself, creating an even bigger safety hazard. The bigger problem than this, however, is that they work fine otherwise. There is almost never any warning sign that there is a problem with this breaker *until it actually has a problem*.

Quick History

FPE panels served their purpose at the time of manufacture between 1950's-70's. However, they no longer meet federal safety requirements, and many places discontinued use in the late 1970's. In the 1980's, the [Consumer Protection Safety Commission](#) began to look into the issue – to this day, there are still reports of fire and other hazards linked to these breakers ([click here and search “federal pacific” under All Types on SaferProducts.gov](#)).

The design idea of the Stab-Lok was good in theory, but the internal mechanisms of the breaker become faulty due to the nature of expanding and contracting metals. Over time, the internal connections weaken and can eventually lead to arcing, shorting, and burnouts.

Which, by extension, makes finding individual replacement breakers difficult – even if you found a replacement, it would probably be decades old and potentially expensive.

Other brands (such as GE, Square-D, Eaton, etc.) are much better at meeting current safety code requirements and do not have these mechanical failings.

What You Can Do



Panels and installations are continually improving to meet the code standards. If you have an FPE panel, consider getting it checked for safety even if you don't have any issues. If you are actually having problems with the panel, we highly suggest getting a service upgrade.

Due to the high liability of this brand, we don't warranty repair work on a FPE brand panel, we will only replace them to a more reliable brand, which we WILL warranty.