

FEDERAL PACIFIC PANEL

An InspectHomes4U Consumer Advisory

Hazard or Hype?

Federal Electric, or Federal Pacific Electric (FPE) was a popular manufacturer of panels and breakers from the mid-1950's until the early 1980's.

For years many stories have circulated about the hazards and defects unique to this equipment, and the darker rumors include tales of product recalls, fraudulent manufacturing, and **house fires resulting from failed breakers**. Inspectors and electricians share tales of breakers falling out of panels when the deadfront is removed, or breakers failing to shut off when the handle is operated.

For more information about FPE panels, how to identify them and other helpful sources; call us.

FPE Electric Panel



Three reasons why FPE panels raise issues

1. The equipment is **old**, and manufactured to less stringent codes and standards than older equipment. Electrical equipment is not something that improves with age.
2. There are problems **unique to the design** of the FPE Stablok breakers, problems that are not found in other electrical equipment this age.
3. There are issues of manufacturing **defects** and **circuit breaker failures**. This is the greatest concern; what good is a circuit breaker that won't trip when overloaded or shorted? What good is a breaker that doesn't de-energize the circuit when the handle is tripped?

* Article by Douglas Hansen, published in magazine for California Real Estate Inspection Assoc. & other tech. journals

The Unique Design of FPE panels/ Product issues

Often when the front panel of FPE's are removed, the breakers trip. Several FPE panels have breakers that are "on" when the handle is positioned toward the outside of the panels. The handles stick out slightly over the deadfront, past the twist-out opening for the breaker. To remove, it is necessary to first lift it slightly away from the panel, then slide it under the handles of one row while lifting the cover off the other row.

The breakers in an FPE have a set of prongs that are inserted into a slot in the bus bars. The result is a connection between two pieces of metal that are at right angles to each other, only touching at their edges. One of the common FPE problems is to find the breakers loose in the bus bars. Good electrical connections require contact pressure. If the FPE stab only touches one edge of the opening in the bus, the lack of contact pressure and that small contact area will combine to produce arcing and overheating.

There is less gutter space in the panels than in modern equipment. Overcrowding of the wires in the panel causes a blocked view of the terminals and the space to bend wires is also less than modern panels.

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