

Zinsco or Sylvania-Zinsco Electrical Equipment Hazards

Most of the time we check a Zinsco/Sylvania panel it looks great to the naked eye even with the cover off. There may be no obvious heat damage or signs of conductor damage. Home inspectors who comply with the *CREIA Standard of Practice* will remove the electric panel cover but they will not remove the circuit breakers themselves nor perform any other disassembly of electrical panel components.

Inspecting in this manner will usually not disclose damage even though very significant damage such as overheated connections, blown-out circuit breakers, or other failures may be present. Many of the panels inspected do not have a main breaker so the only way to disconnect all the power is to have the meter pulled out by the power company - a step well beyond the scope of a home inspection. Many times when a licensed electrician pulls out the breakers, the breakers and bussing are damaged. These panels have been seen to be in such poor condition that the part of the breaker that pushes onto the bussing has become welded to the buss. These breakers have actually broken apart with the connection staying on the buss and the rest of the breaker coming out.

Damage is found in about 25% of the Zinsco/Sylvania panels that are checked. The problem occurs mostly on circuit breakers feeding circuits that have a steady heavy load on them (like heaters, hot water tanks, dryers), and on circuits that are often overloaded such as circuits that supply the kitchen or bathroom.

Our reports say:

[FE] The subpanel is a Sylvania/Zinsco panel. **Opinions of electrical professionals vary on the need to replace or upgrade these panels.** These panels have been known to have problems of poor contact between the breaker and the bus bar and many have failed due to arcing between the components. Though there was no evidence of failure at the time of the inspection, due to their history and the location of the failure, it is recommended that an evaluation be completed by a licensed electrical contractor during the inspection period and before the close of escrow.

Failure Mechanisms for Zinsco Electric Panels and Circuit Breakers

- Arcing and/or overheating, or a similar failure process occurs at the connection of the circuit breaker to the electrical panel bus damage the bus, the breaker, and the connection, making the electrical contact unreliable and leading to equipment failure.
- Circuit breakers become damaged by arcing or overheating. Damaged circuit breakers are unlikely to perform properly in response to an overcurrent condition.
- Aluminum electrical panel components appear to be an important factor in failures in this equipment
- Moisture exposure appears to be a factor in failures in this equipment.

Types of Zinsco Panel and Circuit Breaker Failures

- Circuit breakers may fail to trip in response to an overcurrent condition. This is a fire and shock risk.
- Circuit breakers may "blow out" the side casing of the device in an electrical "arc explosion."
- Circuit breakers may fail to drop power even when they are switched off - that is, the breaker may appear to be switched to the "off" position but internally it may still be conducting power to the circuit.

Below are some photos of Zinsco/Sylvania Panels









